

PRECIPITATION EXTREMES WITHIN THE CITY LIMITS OF BALTIMORE, MARYLAND

Daily, 24-Hour, Monthly, and Annual Amounts (in Inches)

Period of Record: 1871-PRESENT

Month	Maximum Calendar-Day Amount	Maximum Calendar-Day Date	Location	Maximum 24-Hour Amount	Maximum 24-Hour Date(s)	Location	Maximum Monthly	Maximum Monthly Year	Location	Minimum Monthly	Minimum Monthly Year	Location
January	3.22	1/3/1944	Custom House	3.73	1/3-4/1944	Custom House	8.64	1979	Custom House	0.33	1955	Custom House
February	3.48	2/6/1896	Calvert St & Fayette St	3.48	2/6/1896	Calvert St & Fayette St	7.16	1899	Johns Hopkins Hospital	0.30	2009	Cylburn (Arboretum)
March	3.51	3/9/1881	South St & Water St	4.14	3/19-20/1958	Custom House	9.76	1983	Custom House	0.15	2006	Maryland Science Center
April	*3.99	4/30/2014	Maryland Science Center	*3.99	4/25-26/1937; 4/30/2014	Custom House; Maryland Science Center	9.30	2014	Maryland Science Center	0.35	1985	Custom House
May	*3.89	5/25/1952	Custom House	*3.89	5/25/1952	Custom House	9.31	1989	Custom House	0.39	2023	Maryland Science Center
June	4.47	6/28/1885	South St & Water St	4.47	6/28/1885	South St & Water St	10.06	2015	Cylburn (Arboretum)	0.35	1954	Sledd's Point
July	4.66	7/10/1975	Custom House	4.66	7/10/1975	Custom House	11.68	1975	Custom House	0.35	1955	Custom House
August	7.62	8/23/1933	Custom House	7.82	8/12-13/1955	Custom House	17.69	1955	Custom House	0.30	1962	Custom House
September	5.97	9/24/1912	Custom House	6.07	9/24-25/1912	Custom House	12.41	1934	Custom House	**0.07	1967	Custom House
October	6.08	10/29/2012	Maryland Science Center	6.08	10/29/2012	Maryland Science Center	11.44	2012	Cylburn (Arboretum)	0.05	1924	Custom House
November	3.11	11/16/1926	Custom House	4.19	11/12-13/1937	Custom House	8.76	1972	Custom House	0.42	1981	Custom House
December	3.98	12/18/1977	Custom House	3.98	12/18/1977	Custom House	8.78	1901	Johns Hopkins Hospital	0.11	1896	Johns Hopkins Hospital
EXTREME	7.62	8/23/1933	Custom House	7.82	8/12-13/1955	Custom House	17.69	8/1955	Custom House	0.05	10/1924	Custom House

U.S. Custom House, Baltimore, MD
U.S. National Register of Historic Places
(Photo from Waymarking.com)



Annual Extremes within Baltimore City					
Max.	Year	Location	Min.	Year	Location
68.76	2018	Maryland Science Center	21.55	1930	Custom House

Data through 1/31/2024, Updated 2/19/2024

NOTES: 1) *For April & May 2014: The NWS COOP Station 'Cylburn' (Arboretum) has an Observation time of 0800 Hours. When comparing surrounding stations with various observation times, it is most likely that the majority of the 4.20" of rainfall reported on 5/1/2014 fell within the Calendar day of 4/30/2014 (after 8 a.m. and before midnight) but this actual value cannot be determined. The 2-day total of 5.87" (otherwise reported as 1.67" on 4/30/2014 and 4.20" on 5/1/2014) was certainly historic for the City of Baltimore, and even for the State, especially at this time of year. Additionally, the Custom House's 3.99" covering the period 4/25-26/1937 is a 24-hour amount so is not included as a Calendar-Day amount.

2) **In September 2019 the ASOS station at Maryland Science Center (Baltimore Inner Harbor) recorded 0.08", just missing the monthly record minimum amount of 0.07", with the final 0.01" falling on the last day of the month.

3) ***The Fort McHenry station was not an official National Weather Service Cooperative Observer Station so is not included in the Table above. However, a few instances where the Ft. McHenry data supersedes the official station data above (See the 'Baltimore City Precipitation Stations' table to the right for Ft. McHenry's period of record):

JANUARY:	Daily Total: 4.21" on January 28, 1859
FEBRUARY:	Daily Total: 4.14" on February 25, 1859
MARCH:	Daily Total: 3.80" on March 31, 1837
APRIL:	24-Hour Total: 5.00" on 4/25-26/1889
MAY:	Monthly Total: 11.98" in 1889 Daily Total: 4.96" on May 6, 1858
NOVEMBER:	Daily Total: 3.73" on November 2, 1846
DECEMBER:	Daily Total: 4.20" on December 26, 1890
ANNUAL:	Yearly Maximum Total: 66.38" in 1889 (per April 1893 CD, narrative on p. 5)

4) ANNUAL MAXIMUM (PREVIOUS): 66.38" in 1889 at Fort McHenry (per April 1893 CD, narrative on p. 5); Downtown: 62.35" in 1889.

5) ANNUAL MINIMUM: 21.55" in 1930 at Custom House; Fort McHenry: 22.43" in 1870 (per April 1893 Maryland/Delaware Climatological Data publication, narrative on p. 5).

Data for Baltimore-Washington International Thurgood Marshall Airport (BWI, formerly Friendship International) is not included as it is in Anne Arundel County, about 4 miles south and southwest of the Baltimore City boundary. For BWI records, please click the link below:

<https://marylandclimateandweather.weather.together.net/baltimore-airport-record-precipitation-daily-monthly-annual-amounts/>

BALTIMORE CITY PRECIPITATION STATIONS	
Location	Period of Record
1) Downtown (pre-NWS)	1/1818-7/1829; 1/1837-6/1837; 1/1846-10/1853; 11/1857-8/1859
2) ***Fort McHenry	5/1836-2/1892 (periodic)
3) Downtown Stations	12/23/1870-PRESENT
a) South & Water Streets (SW Corner) - Fireman's Insurance Bldg	1/1/1871-12/31/1888
b) Holliday & Baltimore Streets (SW Corner) - Neal Office Bldg	1/1/1889-5/31/1890
c) W. Monument St & Linden Ave (NW Corner) - Johns Hopkins University Physics Lab	6/1/1891-9/6/1895
d) N. Calvert & E. Fayette Streets (SW Corner) - Equitable Building	9/7/1895-7/31/1896
e) 532 N. Howard Street - Johns Hopkins University Treasurer's Bldg	8/1/1896-12/31/1907
f) S. Gay & Water Streets (Custom House)	1/1/1908-5/31/1999
g) Maryland Science Center/Inner Harbor	1/1/1999-6/2/2020; 8/15/2022-PRESENT
4) Johns Hopkins Hospital (N. Broadway & E. Monument St.)	12/1896-4/1907
5) Walbrook	2/1899-2/1900 (intermittent data)
6) Lake Montebello	12/1905-11/1907; 1/1910-12/1916; 3/1919-1/1922
7) Baltimore - Sledds Point	3/1918-9/1920; 12/1949-5/1957
8) Baltimore Airport (Municipal Airport/Army Air Field) (see Note 2 below the Top-20 table)	7/1939-7/1950
9) Baltimore - Hamilton	7/1948-4/1950; 3/1957-11/1960
10) Cylburn (Arboretum)	10/1995-11/1995; 5/1997-8/2017; 4/2019-PRESENT

STATION DATA SOURCE: NOAA, NCDC, "Local Climatological Data, Baltimore, MD Friendship Int'l AP," 1955; NOAA, NCDC, "Local Climatological Data, Baltimore, MD Custom House," 1949 & 1964; NOAA, NCDC, "2012 Local Climatological Data, Annual Summary, Baltimore, MD, KBWI."

DOWNTOWN STATION NOTES: 1) 8" rain gauge through entire period.
2) Additionally, a tipping bucket rain gauge added 6/13/1897.

BALTIMORE CITY PRECIPITATION EXTREMES
Top-20 Maximum Daily, Monthly, and Annual Amounts
All Stations within Baltimore City Limits
(Measurements in Inches)

RANK	MAXIMUM 24-HOUR/CALENDAR-DAY PRECIP.	DATE(S)	LOCATION	RANK	MAXIMUM MONTHLY PRECIP.	MONTH/YEAR	LOCATION	RANK	MAXIMUM ANNUAL PRECIP.	YEAR	LOCATION
1	7.82	8/12-13/1955	Custom House	1	17.69	8/1955	Custom House	1	68.76	2018	Maryland Science Center
2	7.62	8/23/1933	Custom House	2	15.45	8/1955	Sledds Pt	2	62.35	1889	Custom House
3	6.11	8/1/1971	Custom House	3	14.86	8/1971	Custom House	3	61.57	1971	Custom House
4	6.08	10/29/2012	Maryland Science Center	4	13.83	8/1933	Custom House	4	61.52	1975	Custom House
5	6.07	9/24-25/1912	Custom House	5	13.32	8/1911	Lake Montebello	5	61.38	1948	Municipal Airport
6	6.03	8/4/1911	Lake Montebello	6	12.41	9/1934	Custom House	6	61.36	1979	Custom House
7	5.97	9/24/1912	Custom House	7	12.28	8/1911	Custom House	7	58.21	1983	Custom House
8	5.94	9/16/1976	Custom House	8	11.97	8/2011	Maryland Science Center	8	56.72	2003	Maryland Science Center
9	5.72	9/30/2010	Maryland Science Center	9	11.68	7/1975	Custom House	9	56.72	1972	Custom House
10	5.68	10/8/2005	Cylburn (Arboretum)	10	11.50	7/1958	Custom House	10	55.89	1952	Custom House
11	5.42	8/12/2014	Maryland Science Center	11	11.44	10/2012	Cylburn (Arboretum)	11	54.71	1948	Custom House
12	5.30	10/9-10/1922	Custom House	12	11.03	7/1889	Custom House	12	54.70	1902	Johns Hopkins Hospital
13	5.11	8/13/1955	Sledd's Point	13	10.99	9/2011	Cylburn (Arboretum)	13	54.21	1891	Custom House
14	4.76	9/6/1895	Custom House	14	10.94	10/2005	Cylburn (Arboretum)	14	54.06	2011	Maryland Science Center
15	4.67	8/8/1942	Municipal Airport	15	10.93	7/1905	Johns Hopkins Hospital	15	53.79	1952	Sledd's Point
16	4.66	7/10/1975	Custom House	16	10.84	9/1999	Maryland Science Center	16	53.59	2015	Cylburn (Arboretum)
17	4.61	9/27/1985	Custom House	17	10.73	9/2011	Maryland Science Center	17	53.17	2014	Maryland Science Center
18	4.60	9/5/1979	Custom House	18	10.65	7/1905	Custom House	18	52.96	1933	Custom House
19	4.60	9/12/1960	Hamilton	19	10.52	9/1876	Custom House	19	52.81	2009	Maryland Science Center
20	4.54	10/8/2005	Maryland Science Center	20	10.51	8/1967	Custom House	20	52.11	1886	Custom House

Data through 1/31/2024, Updated 2/19/2024

WASHINGTON MONUMENT
Mt. Vernon Place, Baltimore, MD
(Photo from VisitBaltimore.com)



DATA SOURCE: 1) National Centers for Environmental Information (NCEI): "Local Climatological Data, Baltimore, Maryland."

<https://www.ncdc.noaa.gov/lPS/lcd/lcd.html>

2) NCEI, "Maryland and Delaware Climatological Data"

<https://www.ncdc.noaa.gov/lPS/cd/cd.html>

3) National Weather Service (NWS), Cooperative Observer Network original weather forms.

<https://www.ncdc.noaa.gov/lPS/coop/coop.html>

4) Applied Climate Information System (ACIS) database:

<https://scacis.rcc-acis.org/>

5) Maryland Weather Service, Vol. I. Baltimore, The Johns Hopkins Press, 1899.

6) The National Weather Service has recently begun recognizing the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) as official stations when a state record has potentially been established. Only after research into each stations' location and instrument siting/set-up, along with interviewing the observer, is the data then considered official. Though without official status, the following stations would be in the top-20 lists above:

<https://www.cocorahs.org/>

MAXIMUM CALENDAR-DAY PRECIPITATION

Hamilton 0.3 NE	6.55" on 10/1/2010
Mount Washington 0.5 N	6.51" on 10/30/2012
Hamilton 0.3 NE	6.04" on 10/30/2012
Hamilton 0.3 NE	5.02" on 8/13/2010
Hamilton 0.3 NE	4.54" on 8/28/2011

MAXIMUM MONTHLY PRECIPITATION

Hamilton 0.3 NE	13.07" in 8/2011 (missing data on Aug. 8th)
Hamilton 0.3 NE	12.52" in 9/2011 (missing data on Sept. 13th & 17th)
Mount Washington 0.5 N	12.14" in 7/2018
Hamilton 0.3 NE	11.83" in 7/2018 (missing data for July 29th-31st)
Mount Washington 0.5 N	11.71" in 9/2018
Hamilton 0.3 NE	11.19" in 6/2013 (missing data on June 12th & 30th)
Baltimore 1.7 S	11.02" in 9/2018 (missing data for Sept. 1st-6th)

MAXIMUM ANNUAL PRECIPITATION

Hamilton 0.3 NE	70.57" in 2018
Mount Washington 0.5 N	67.81" in 2018

NOTE: The 70.57" Annual Total at the CoCoRaHS station "Hamilton 0.3 NE" in 2018, if declared official, would supersede the existing annual extreme within Baltimore City of 68.76" in 2018 at the Maryland Science Center (Inner Harbor).

NOTES:

1) Baltimore-Washington International Airport is not included as it is in Anne Arundel County.

2)The "Baltimore Airport" spanned the Baltimore City/Dundalk, MD boundary and was known as Municipal Airport until 1941 or 1942, Army Airfield until 1945 or 1946 (during WW II), then again as Municipal Airport until 1950. Available data began in 7/1939 until official weather data records were transferred to the new Friendship International Airport (now BWI), Anne Arundel County on 7/23/1950; Municipal Airport was then renamed Harbor Field before closing soon after.

3) Ties are shown with the most recent date at the higher ranking.

4) *The Fort McHenry station was not an official National Weather Service Cooperative Observer Station so is not included in the Table above. However, a few instances where the Ft. McHenry data would be listed on the table above: (See the 'Baltimore City Precipitation Stations' table to the right for Ft. McHenry's period of record).

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