



# Capitol Region Watershed District 2025 Climatological Summary



# CRWD 2025 Climatological Summary

Saint Paul, Minnesota

Cover image: View of Downtown Saint Paul from Wicahapi Regional Park in Capitol Region Watershed District, September 2025.



# 2025 Climatological Summary

## Contents

- 1 Introduction ..... 4
  - 1.1 Purpose..... 4
  - 1.2 Background ..... 4
  - 1.3 Goals..... 4
  - 1.4 Methods..... 4
- 2 Results..... 5
  - 2.1 Temperature ..... 5
  - 2.2 Annual Precipitation ..... 9
    - 2.2.1 Total Annual Precipitation ..... 9
    - 2.2.2 Total Monthly Precipitation ..... 11
    - 2.2.3 Daily Precipitation ..... 11
    - 2.2.4 District Precipitation Monitoring Stations..... 11
  - 2.3 Growing Season Precipitation ..... 16
  - 2.4 Water Year Precipitation ..... 17
  - 2.5 Total Annual Snow, Winter Snowpack, and Meteorological Winter Total Snow .....20
  - 2.6 Lakes ..... 23
    - 2.6.1 Ice-In and Ice-Out ..... 23
    - 2.6.2 Surface Water Temperature ..... 23
  - 2.7 Notable Climatological Events ..... 25
  - 2.8 Drought..... 26
- 3 Summary..... 27
- 4 References ..... 28
- 5 Appendix..... 30

# 1 Introduction

## 1.1 Purpose

The purpose of this report is to summarize 2025 climatological data within the boundaries of Capitol Region Watershed District (CRWD) in Saint Paul, Minnesota.

## 1.2 Background

Climate and climatological events directly impact District water resources, projects, and programs. Some examples of this include precipitation's effect on watershed loading to receiving water bodies, flooding and flood mitigation planning, and design and installation of stormwater best management practices (BMPs). CRWD uses climatological data to calculate total annual precipitation, runoff, and nutrient and pollutant loading, as well as to assess effects of drought and flooding in the District. It is important to document and analyze climatological data and other noteworthy climatological events to assess their impact and how they change over time due to climate change. Because of this, the District analyzes temperature, growing season precipitation, anomalous weather events, drought, and other relevant climatological data to broaden our understanding of climate and climate change in the District.

The effects of climate change are already being observed in CRWD. According to the Department of Natural Resources (DNR) State Climatology Office, Minnesota is experiencing substantial winter and nighttime warming and more frequent extreme precipitation events as a result of climate change (DNR, 2026). These trends are expected to worsen along with increased summer temperatures and longer periods of drought. Continued monitoring of CRWD's climate and climatological events is critical in the implementation of the District's [Climate Resiliency Framework](#), which, in accordance with CRWD's [Watershed Management Plan](#), documents and clarifies the District's role, approaches, and actions it can take to plan for and address local impacts of climate change.

## 1.3 Goals

The overall goal of the climatological summary is to act as a formal record of annual standard climatological data as well as notable and significant climatological events. Over time, the summaries will allow the District to assess how the local climate has changed, as well as how the District has responded physically, hydrologically, and ecologically.

## 1.4 Methods

The District utilizes precipitation data collected by the University of Minnesota (U of M) St. Paul Campus Climate Observatory and from the National Weather Service (NWS) station at Minneapolis-St. Paul (MSP) International Airport. The U of M Climate Observatory records precipitation every fifteen minutes from an automatic rain gauge located in the northwest portion of CRWD. The U of M rain gauge was used as CRWD's primary precipitation monitoring station for rainfall when possible due to its location in the District. Rainfall totals (15-minute and daily) were recorded by CRWD from the MN DNR website (DNR, 2025a). The NWS weather station at MSP airport, located approximately six miles south of the CRWD office, records hourly rainfall and snow water equivalent. Because of this, NWS MSP data is used for precipitation totals from November through March to account for snowfall. These variables were recorded by CRWD from the Midwestern Regional Climate Center (MRCC) website (MRCC, 2025).

Additionally, CRWD operates four precipitation monitoring stations at different locations throughout the District. These monitoring stations consist of automatic tipping bucket-style rain gauges that log precipitation at a 0.01-inch resolution and are typically installed April through October apart from one rain gauge installed year-round at the CRWD office. Due to differences in rain gauge installation and removal dates in 2025, precipitation data from May through September is compared instead. Data from the precipitation monitoring station at Upper Villa Park was disregarded in 2025 due to numerous data collection issues. There is also a manual rain gauge installed year-round at the CRWD office that is checked daily; precipitation totals from this rain gauge are entered into the Community Collaborative Rain, Hail and Snow (CoCoRaHS) Network website.

Daily climate data including maximum and minimum temperature, precipitation, snow, and snow depth is utilized from the U of M as part of the NWS Cooperative Observer Program (COOP); this data is recorded by CRWD from the DNR website (DNR, 2025b). All temperatures are recorded in degrees Fahrenheit (F). District lake ice-out dates are also accessed from the DNR website (DNR, 2025c). All Minnesota drought data are acquired from the United States Drought Monitor, a partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture (USDA) and NOAA (U.S. Drought Monitor, 2025). Information on significant climatological events is provided by the DNR State Climatology Office (DNR, 2025d).

District lake data including surface water temperatures and additional lake ice-in and ice-out information are collected by Ramsey County Public Works (RCPW) and sent to CRWD as part of an ongoing lake monitoring agreement.

## 2 Results

### 2.1 Temperature

Table 1 shows 2025 monthly average temperatures, 30-year normal monthly average temperatures, and departure from normal. Figure 1 shows 2025 average daily temperatures as compared to 30-year normal monthly average temperatures. Figure 2 shows 2024-2025 meteorological winter average daily temperatures compared to 30-year normal monthly average temperatures. Meteorological winter is defined as December through February and is different than astronomical winter, December 21 through March 21, which begins with the winter solstice and ends with the spring equinox (NOAA, 2025a). The monthly average temperature for December 2024 in the District was nearly normal at 0.10 degrees warmer than normal, however 2025 experienced a cool start to the year with January and February averaging 3.5 and 6.7 degrees cooler than normal, respectively.

Warm weather in March helped to set a new record high temperature (see [section 2.7](#)), and was the only month with an above-normal monthly average temperature in the District until September, with April through August representing five consecutive months of below-normal average temperatures. September through November all averaged warmer than normal. According to the DNR, September temperatures were “persistently warm and even hot at times”, representing the third year in a row of high-ranking warmth and highlighting a trend of summerlike temperatures being pushed later into the fall and causing September to be Minnesota’s third-fastest warming month (DNR, 2025e,f). December finished the year off with an average monthly temperature nearly 5 degrees below normal.

**Table 1: 2025 monthly average temperatures (F) calculated from daily high and low temperatures at the U of M NWS station, 30-year normal monthly average temperatures, and departure from normal.**

Month	2025 Average Temperature	30-Year Normal Monthly Average Temperature	Departure from Normal
Jan	12.7	16.2	(-) 3.5
Feb	13.9	20.6	(-) 6.7
Mar	35.9	33.3	(+) 2.6
Apr	44.5	47.1	(-) 2.6
May	58.5	59.5	(-) 1.0
Jun	66.9	69.7	(-) 2.8
Jul	73.2	74.3	(-) 1.1
Aug	69.8	71.8	(-) 2.0
Sep	64.9	63.5	(+) 1.4
Oct	53.2	49.5	(+) 3.7
Nov	36.3	34.8	(+) 1.5
Dec	17.1	22	(-) 4.9
Annual	45.6	46.9	(-) 1.3

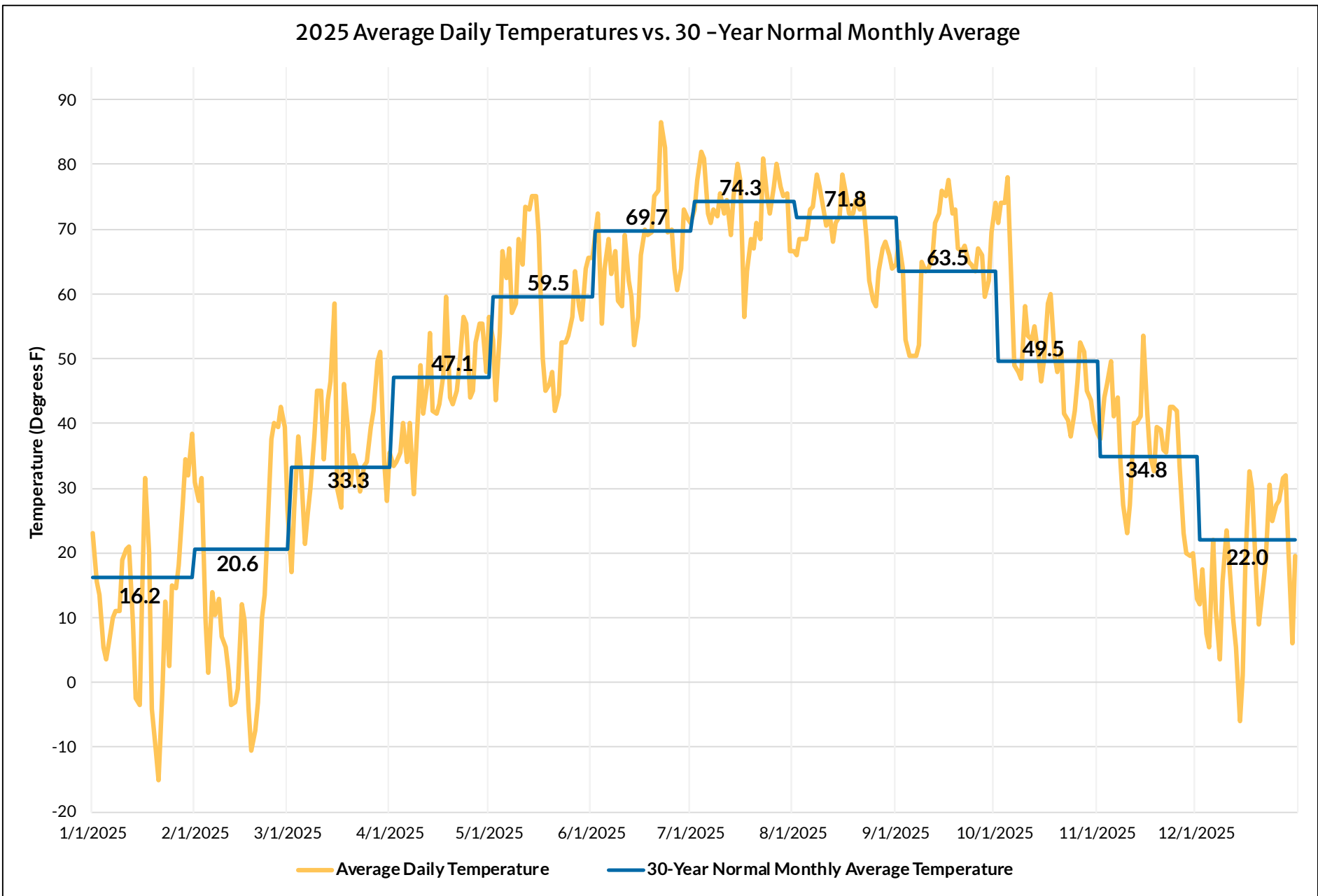


Figure 1: 2025 average daily temperatures at the U of M NWS station compared to 30-year normal monthly average temperatures (F).

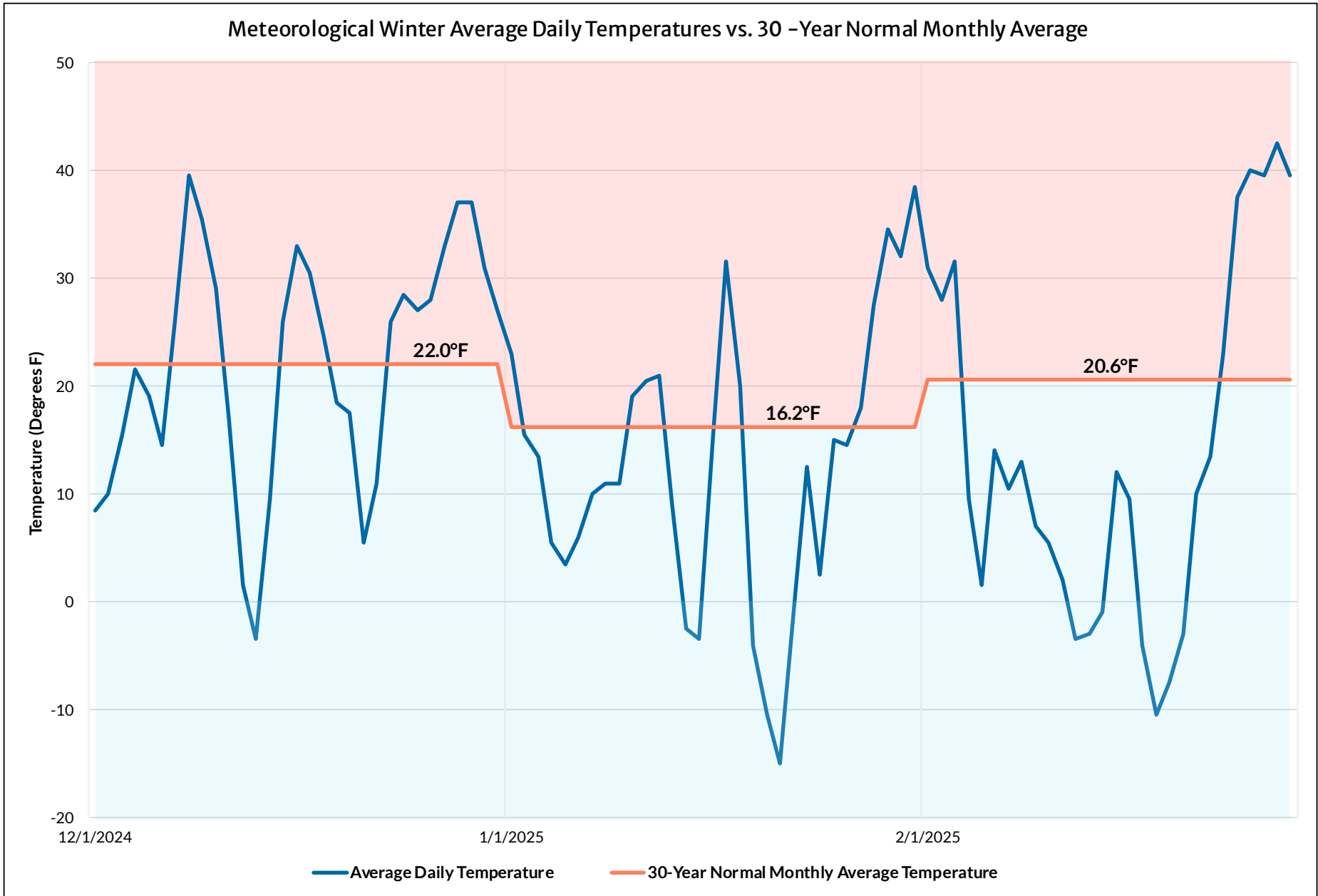


Figure 2: Meteorological winter (December 2024 - February 2025) average daily temperatures and 30-year normal monthly average temperatures.

## 2.2 Annual Precipitation

### 2.2.1 Total Annual Precipitation

The total amount of precipitation recorded in CRWD in 2025 was 30.30 inches, which is 1.32 inches less than the 30-year normal. Total precipitation includes both rainfall and snow water equivalent. The 30-year normal is recalculated every 10 years. In 2020, the annual 30-year normal was recalculated for 1991-2020 to be 31.62 inches (formerly 30.61 inches for the period from 1981-2010) (NOAA, 2025b). Annual precipitation data from 2010 to 2025 and departure from the 30-year normal can be seen in Table 2 and Figure 3.

**Table 2: 2010-2025 annual precipitation in CRWD, 30-year normal, and departure from normal.**

Year	Precipitation (inches)	Departure from 30-Year Normal
2010	36.32	(+) 4.70
2011	33.62	(+) 2.00
2012	30.26	(-) 1.36
2013	36.36	(+) 4.74
2014	35.66	(+) 4.04
2015	35.21	(+) 3.59
2016	40.66	(+) 9.04
2017	31.57	(-) 0.05
2018	29.59	(-) 2.03
2019	38.79	(+) 7.17
2020	21.99	(-) 9.63
2021	25.08	(-) 6.54
2022	22.01	(-) 9.61
2023	31.91	(+) 0.29
2024	32.12	(+) 0.50
2025	30.30	(-) 1.32
<b>30-Year Normal</b>	31.62	--

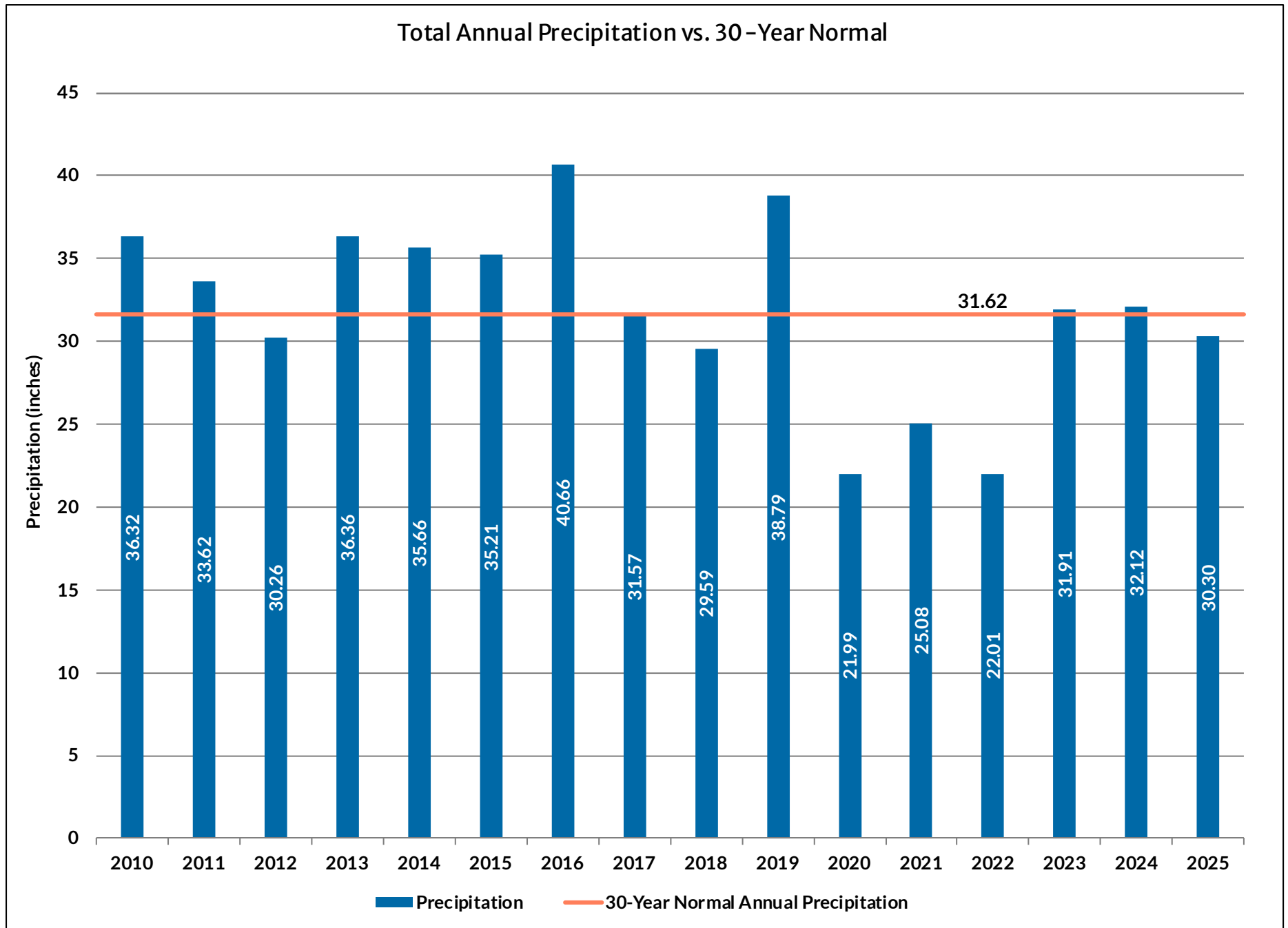


Figure 3: 2010-2025 annual precipitation in CRWD and 30-year normal annual precipitation.

### **2.2.2 Total Monthly Precipitation**

Monthly precipitation totals and their comparison to 30-year normal precipitation can be seen in Figure 4. For the second year in a row, June had the highest positive departure from normal with a total precipitation of 7.28 inches, 2.70 inches more than the 30-year normal of 4.58 inches. July and March had the second and third highest positive departures from normal, 1.18 and 0.94 inches, respectively, due to large, single-day events. October had the highest negative departure from normal at 1.76 inches below normal, followed by August at just over an inch and a half below normal.

### **2.2.3 Daily Precipitation**

Daily, monthly, and annual precipitation totals and their comparison to 30-year monthly and annual normal precipitation, and departure from normal can be seen in Table 3. Figure 5 shows daily precipitation and cumulative precipitation for 2025. The largest single-day precipitation total was on June 27, with 2.54 inches of rain.

### **2.2.4 District Precipitation Monitoring Stations**

Figure 6 shows May through September precipitation totals for CRWD precipitation monitoring stations. The District experienced differing precipitation totals across the watershed, emphasizing the spatial variability of precipitation, even on a local scale. The CRWD office rain gauge collected the highest total annual precipitation at 25.90 inches, followed by Trout Brook Nature Sanctuary rain gauge in the eastern portion of the District with 21.82 inches, and lastly the Victoria Park rain gauge in the southern portion of the District with 20.04 inches. Data from the Upper Villa rain gauge in the northern part of the District was disregarded in 2025 due to various data collection issues.

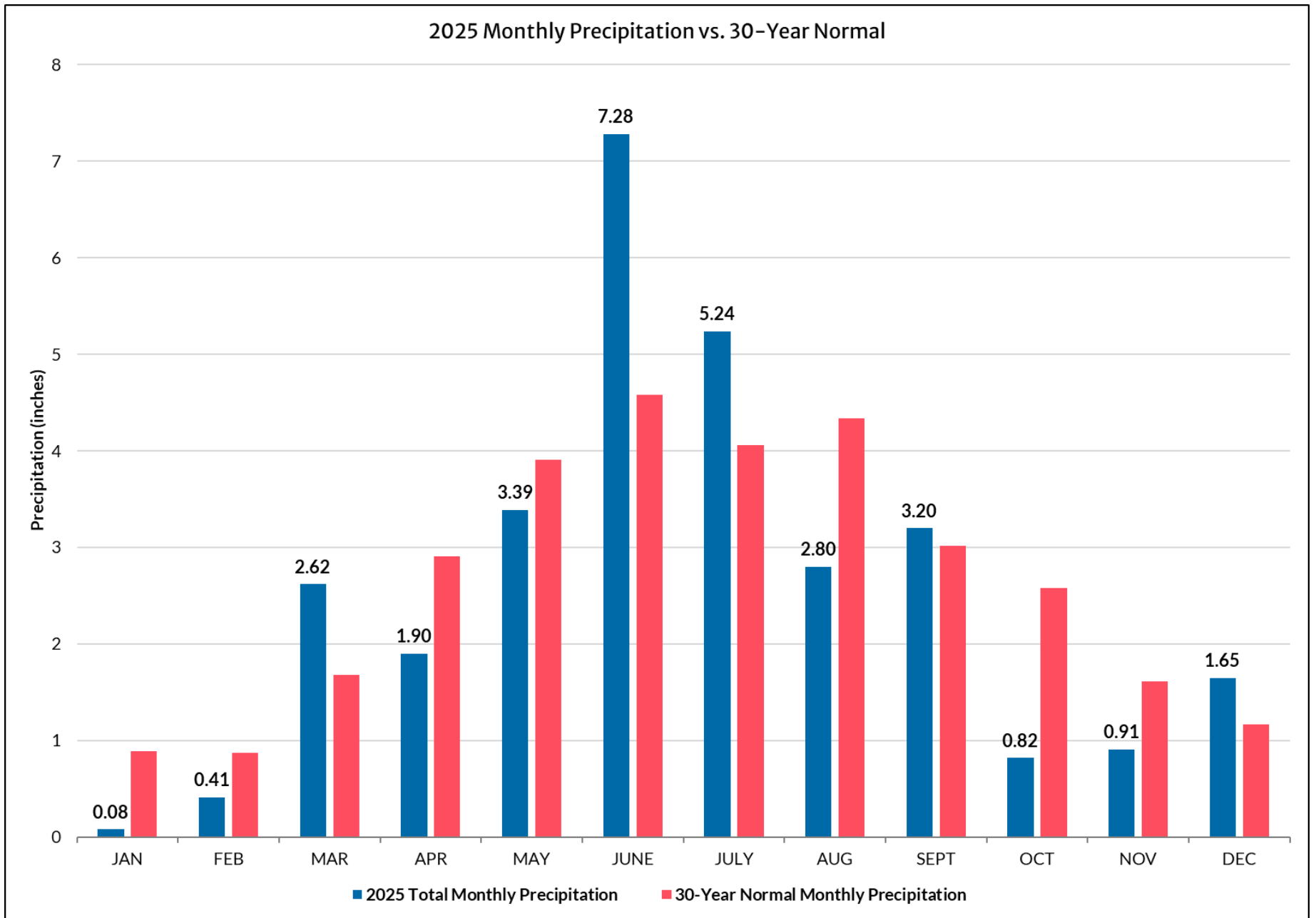


Figure 4: 2025 monthly precipitation totals in CRWD and 30-year normal monthly precipitation, in inches.

Table 3: 2025 daily, monthly, and annual precipitation totals in CRWD; 30-year normal monthly and annual precipitation, and departure from normal.

Day	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1	0	0	0	0.01	0.31	0	0	0	0	0	0.01	0	
2	0	0	0	0.51	0.01	0.09	0	0	0.12	0	0	0.04	
3	0	0.1	0	0	0	0.7	0	0	0	0	0	0.02	
4	0	0	0.24	0	0	0	0	0	0.28	0	0	0	
5	0	0	0.24	0	0	0	0.26	0	0	0.13	0	0.1	
6	0	0.01	0	0	0	0	0	0	0.08	0	0	0.03	
7	0	0	0	0	0	0.46	0	0	0	0	0.01	0	
8	0	0.14	0	0	0	0.05	0	0	0	0	0	0.07	
9	0.05	0	0	0.01	0	0.05	0	1.14	0.42	0	0	0.4	
10	0	0	0	0.06	0	0	0	0	0	0	0	0.05	
11	0	0	0	0	0	0.04	0.03	0	0	0	0	0	
12	0	0.02	0	0	0	0.81	0	0	0.01	0.03	0	0.01	
13	0	0	0	0	0	0.67	0	0	0	0.01	0	0	
14	0	0.11	0.19	0.01	0	0	0	0.02	0	0.38	0	0	
15	0.02	0	0.05	0	0.02	0	0.26	0.17	0	0.01	0.01	0	
16	0	0	0	0	0.13	0.57	0.89	1.11	0	0	0	0	
17	0	0	0	0.18	0.02	0	0	0.35	0	0	0	0	
18	0	0	0	0	0	0	0.07	0	0.95	0	0	0.11	
19	0	0	0	0	0.68	0	0.04	0	0.93	0	0	0	
20	0	0	0	0.35	1.66	0.01	0	0	0	0.06	0	0	
21	0	0	0	0.37	0.42	0	0.43	0	0.41	0.08	0	0	
22	0	0	0.02	0	0	0	0	0	0	0	0	0.03	
23	0	0	0.01	0	0	0	0.64	0	0	0	0	0	
24	0.01	0	0	0.24	0	0	0	0	0	0	0	0	
25	0	0	0	0	0	2.54	0	0	0	0.06	0.39	0	
26	0	0.03	0	0	0	0.6	0	0	0	0	0.15	0.04	
27	0	0	0	0.02	0.07	0	1.76	0	0	0	0	0	
28	0	0	0.02	0.14	0.03	0	0.86	0	0	0	0	0.61	
29	0		1.52	0	0.04	0.63	0	0.01	0	0	0.27	0.01	
30	0		0.33	0	0	0.06	0	0	0	0	0.07	0.04	Annual
31	0		0		0		0	0		0.06		0.09	Totals
<b>Monthly Total</b>	0.08	0.41	2.62	1.90	3.39	7.28	5.24	2.80	3.20	0.82	0.91	1.65	30.30
<b>Monthly Normal</b>	0.89	0.87	1.68	2.91	3.91	4.58	4.06	4.34	3.02	2.58	1.61	1.17	31.62
<b>Departure from Normal</b>	-0.81	-0.46	0.94	-1.01	-0.52	2.70	1.18	-1.54	0.18	-1.76	-0.70	0.48	-1.32

Data supplied by NWS-MSP  
 Data supplied by UMN  
 No data

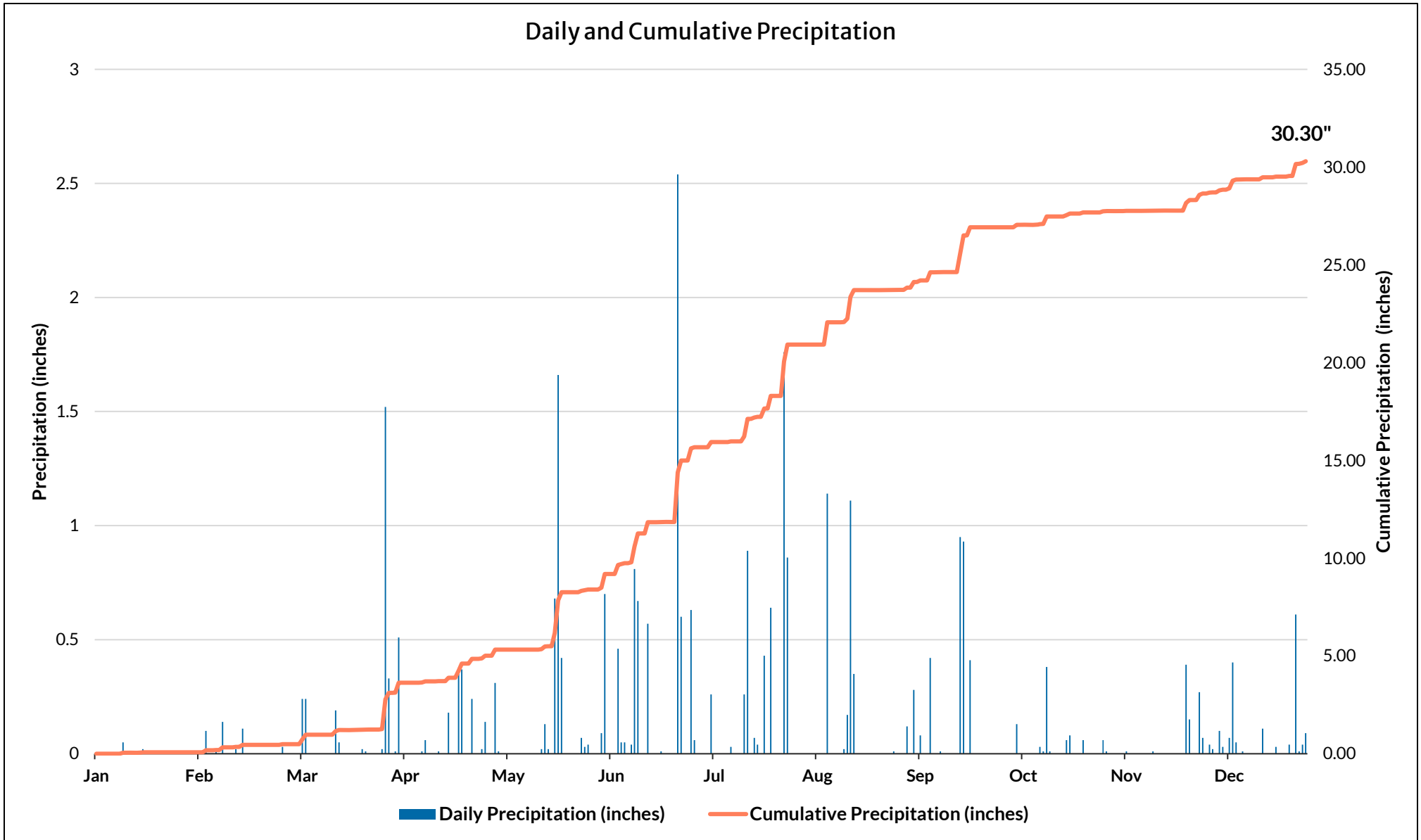
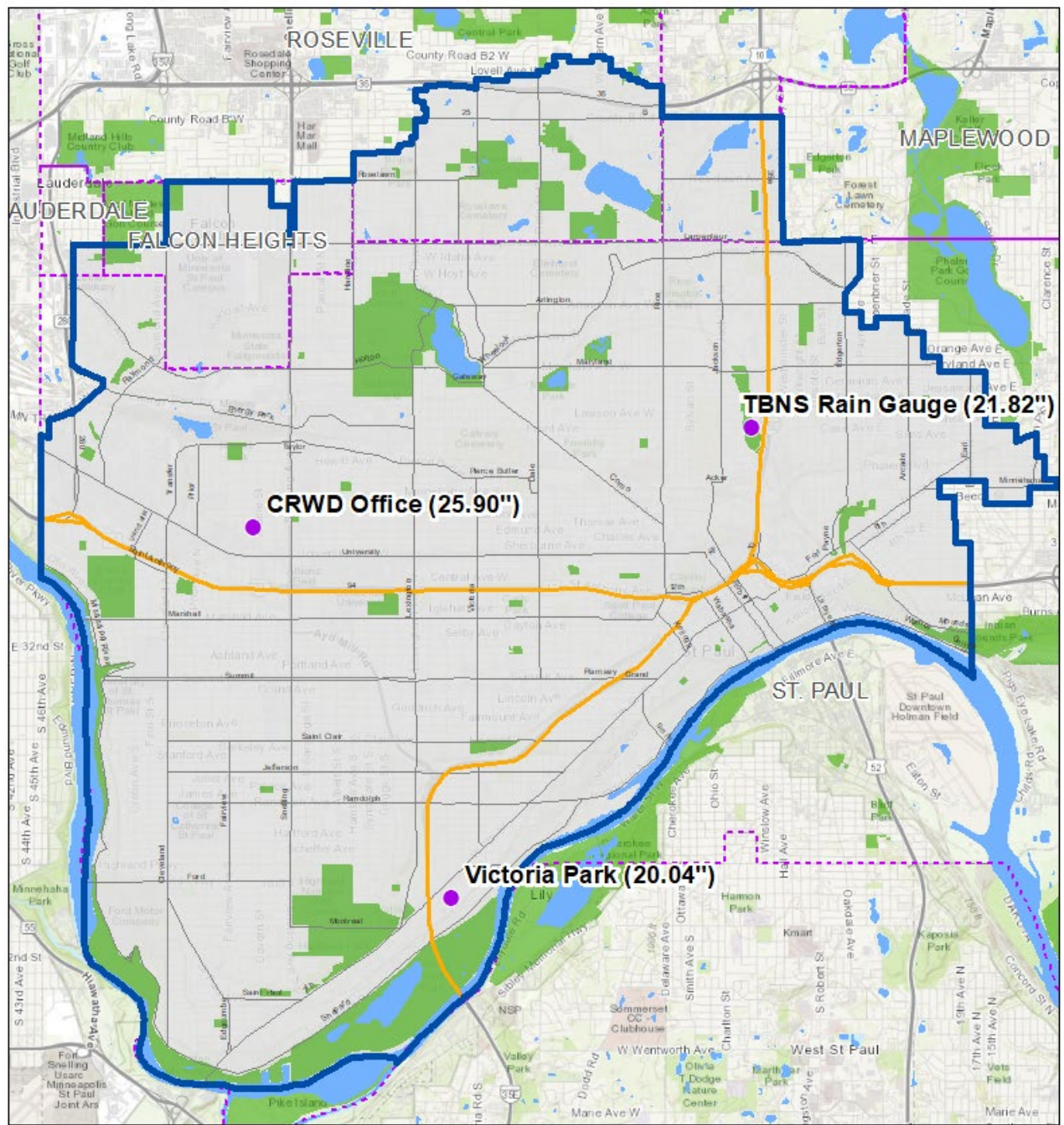


Figure 5: 2025 daily and cumulative precipitation in CRWD.



**Capitol Region Watershed District**

May-September 2025 Precipitation Totals



- CRWD
- Major Highways
- Cities
- Major Waterbodies
- Parks
- Rain Gauge

Figure 6: CRWD precipitation monitoring stations and May-September 2025 precipitation totals.

## 2.3 Growing Season Precipitation

The growing season is determined by the last spring freeze and the first fall frost, but in Minnesota is typically from May through September. It is important to characterize precipitation during the growing season in Minnesota since most of the District's tree and plant growth occurs during this timeframe. According to the U.S. Department of Agriculture (USDA), climate change has caused growing seasons to become longer, however it has also caused a change in precipitation patterns and more frequent and severe extreme precipitation events. Precipitation changes due to climate change can cause excess precipitation during off seasons and limited water availability during critical plant growth periods (USDA, 2025). 2017 through 2025 growing season precipitation in CRWD and departure from normal can be seen in Table 4. Growing season precipitation event totals and maximum daily temperatures are shown in Figure 7.

2025 was the second year in a row with above-normal growing season precipitation, totaling 21.91 inches of precipitation, two inches more than normal. Based on data from the U of M rain gauge, the 2024 and 2025 growing seasons saw a similar number of days with precipitation events totaling half an inch or more (16 for 2024 and 17 for 2025), which is the threshold the District typically uses for stormwater sampling. However, the 2025 growing season saw a total of ten fewer days of any measurable precipitation than 2024 (49 versus 59). Additionally, the 2025 growing season saw fewer smaller precipitation events, with a total of 32 days of precipitation under half an inch, compared to 42 days in 2024. In summary, the 2025 growing season saw fewer daily precipitation events and more dry days between events, with occasional, high intensity events throughout the growing season helping to make up the precipitation difference between 2024 and 2025, ending the season just about three quarters of an inch behind 2024.

**Table 4: 2017-2025 growing season precipitation in CRWD and departure from normal.**

Growing Season (May-September)	Inches of Precipitation	Departure from Normal
2017	19.75	(-) 0.16
2018	20.51	(+) 0.60
2019	22.88	(+) 2.97
2020	14.24	(-) 5.67
2021	13.88	(-) 6.03
2022	10.05	(-) 9.86
2023	16.47	(-) 3.44
2024	22.64	(+) 2.73
2025	21.91	(+) 2.00
Normal	19.91	--

## 2.4 Water Year Precipitation

In addition to calendar year precipitation, the Minnesota State Climatology Office also uses water year precipitation, which runs from October 1<sup>st</sup> to September 30<sup>th</sup> of the following year. The water year is used by hydrologists because water levels are typically lowest near October 1<sup>st</sup>. The water year is defined by the year in which it ends, for example, the 2025 water year begins on 10/1/2024 and ends on 9/30/2025. Thus, the water year represents the beginning of the season of soil moisture recharge and ends with season of maximum soil moisture utilization, according to the American Meteorological Society (AMS) (AMS, 2025). Water year precipitation totals for 2015 through 2025, and 30-year normal annual precipitation are shown in Figure 8. The 2025 water year precipitation total in CRWD was 31.10 inches, which is 0.52 inches below the 30-year normal annual precipitation of 31.62.

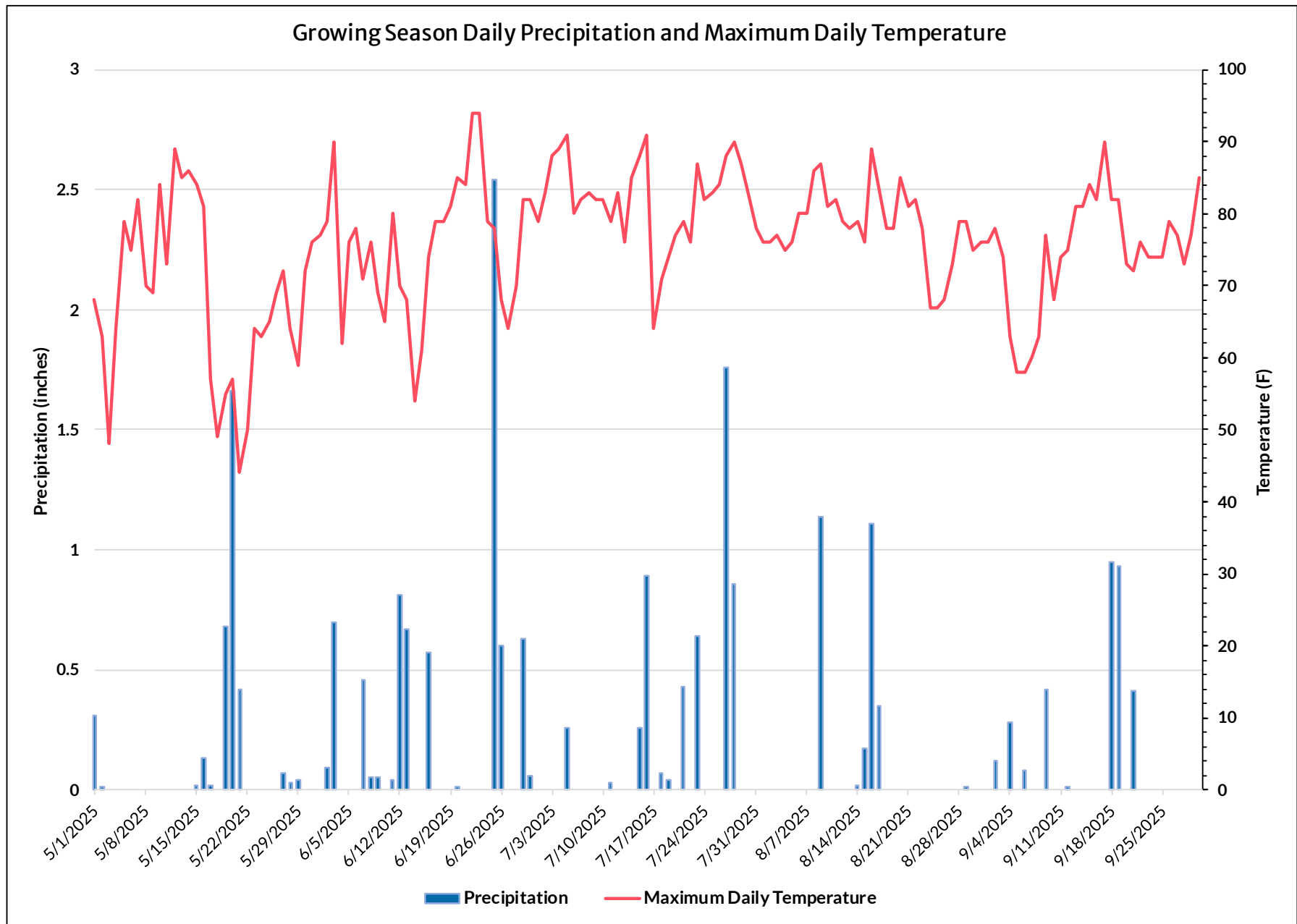


Figure 7: 2025 daily growing season (May-September) precipitation in CRWD and maximum daily temperatures at the U of M NWS station.

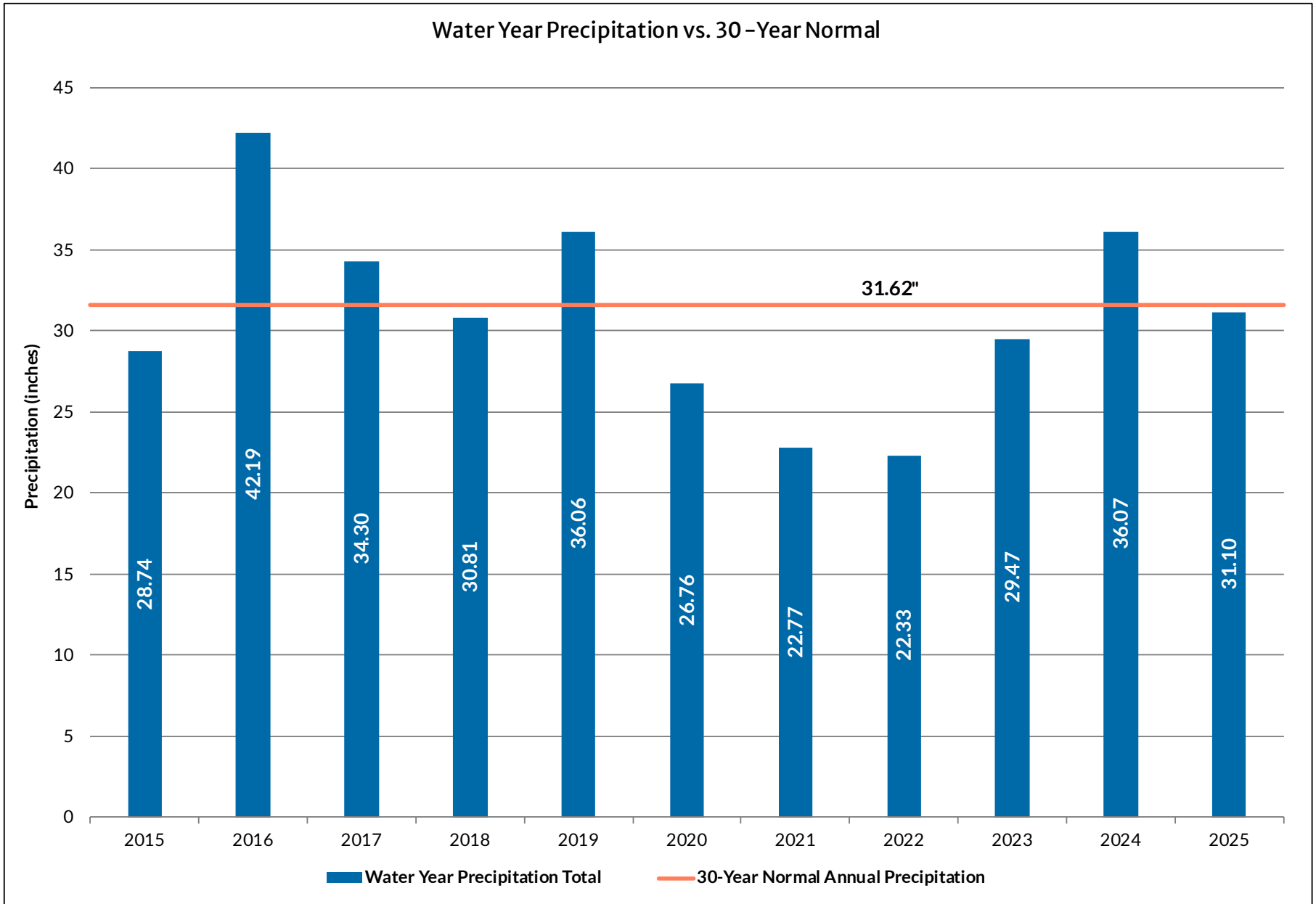


Figure 8: Water year (10/1/24-9/30/25) precipitation total in CRWD and 30-year normal annual precipitation.

## 2.5 Total Annual Snow, Winter Snowpack, and Meteorological Winter Total Snow

Total annual snow in the District can be seen in Table 5. CRWD experienced 39.40 inches of snowfall in 2025, 11.80 inches below the 30-year normal. Snowpack depth—the amount of snow on the ground—and maximum daily temperature is shown in Figure 9. Snowpack depth peaked on March 5 with 7 inches of snowpack, which had completely melted by March 11. A snowfall of nearly 3 inches on April 2 represented the final significant snowfall of the 2024-2025 winter season. Figure 10 shows total meteorological winter (December through February) snow going back to 2013-2014, as well as the 30-year normal meteorological winter snow. The total meteorological winter snow for December 2024 through February 2025 was 16.20 inches, which is 15.70 inches below the 30-year normal of 31.90 inches.

**Table 5: 2010-2025 annual total snow in CRWD, 30-year normal, and departure from normal.**

Year	Total Snow (inches)	Departure from 30-Year Normal
2010	60.20	(+) 9.00
2011	52.00	(+) 0.80
2012	30.80	(-) 20.40
2013	73.00	(+) 21.80
2014	76.20	(+) 25.00
2015	34.31	(-) 16.89
2016	37.70	(-) 13.50
2017	25.90	(-) 25.30
2018	80.70	(+) 29.50
2019	86.90	(+) 35.70
2020	23.90	(-) 27.30
2021	31.10	(-) 20.10
2022	59.70	(+) 8.50
2023	54.40	(+) 3.20
2024	31.50	(-) 19.70
2025	39.40	(-) 11.80
<b>30-Year Normal</b>	51.20	--

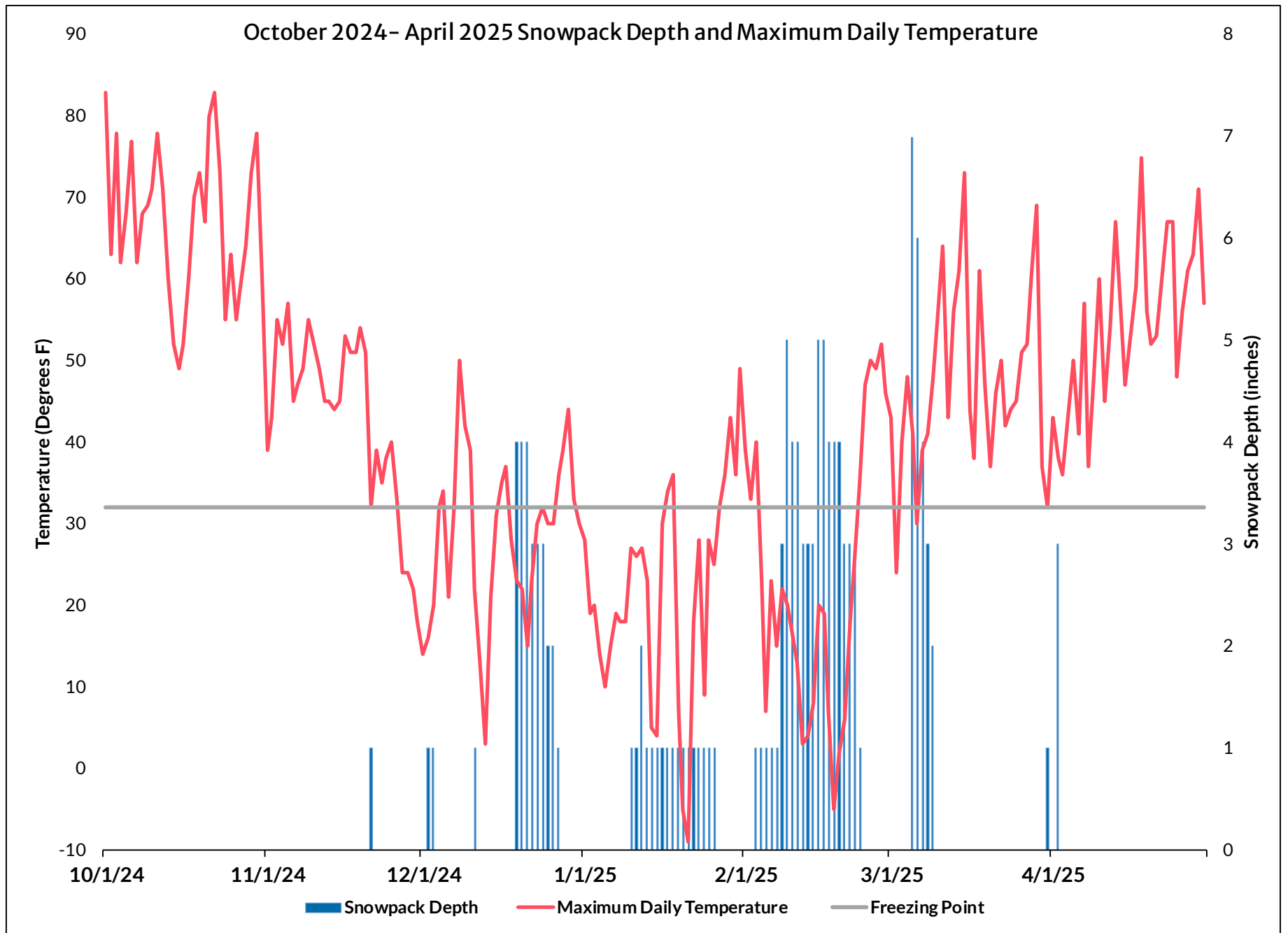


Figure 9: October 2024 through April 2025 snowpack depth, maximum daily temperatures, and freezing point (32 degrees F).

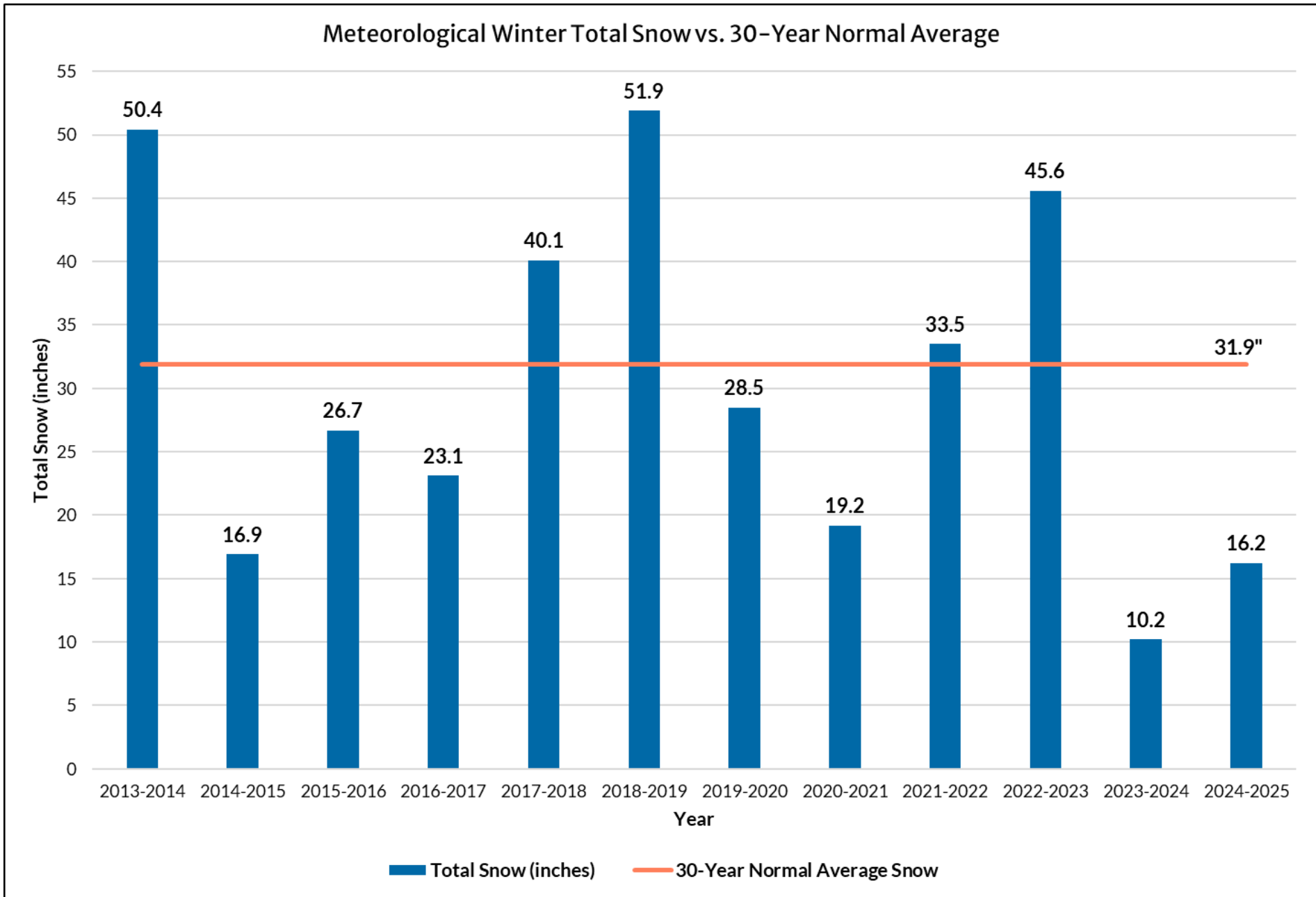


Figure 10: Meteorological winter (December – February) total snow and 30-year normal average meteorological winter snow.

## 2.6 Lakes

### 2.6.1 Ice-In and Ice-Out

For the winter of 2024-2025, Como Lake saw ice-in on December 4, and Lake McCarrons followed shortly behind on December 11. Como and McCarrons had ice-out dates of March 22 and March 23, respectively. The total number of days with ice cover was 110 days for Como Lake, and 102 days for Lake McCarrons. The average number of days with ice cover for Como Lake is 117, with a median ice-in date of December 6 and a median ice-out date of March 28. The shortest season of ice cover on Como was 84 days in 2015-2016 and the longest season of ice cover was 148 days in 2018-2019.

### 2.6.2 Surface Water Temperature

Average, minimum, and maximum surface water temperatures for May through September 2025 as compared to 2024 maximum surface water temperatures for District lakes can be seen in Table 6. Biweekly surface water temperatures for District lakes as measured by RCPW and maximum daily air temperatures for May through September 2025 can be seen in Figure 11. The highest surface water temperature was 79.90 degrees on Little Crosby Lake on July 2. All District lakes had lower maximum surface water temperatures in 2025 than in 2024, potentially due to cooler 2024-2025 winter temperatures and below-normal monthly average temperatures during the growing season.

**Table 6: May-September 2025 average, minimum, and maximum surface water temperatures and 2024 maximum surface water temperatures from RCPW in degrees F for five CRWD lakes.**

Lake	2025 Average Surface Water Temperature (F)	2025 Minimum Surface Water Temperature (F)	2025 Maximum Surface Water Temperature (F)	2024 Maximum Surface Water Temperature (F)
Como	69.6	56.1	78.3	82.6
McCarrons	70.6	57.5	78.3	82.7
Loeb	70.1	57.3	77.3	82.7
Crosby	68.8	55.5	78.2	79.1
Little Crosby	69.6	56.6	79.9	80.1

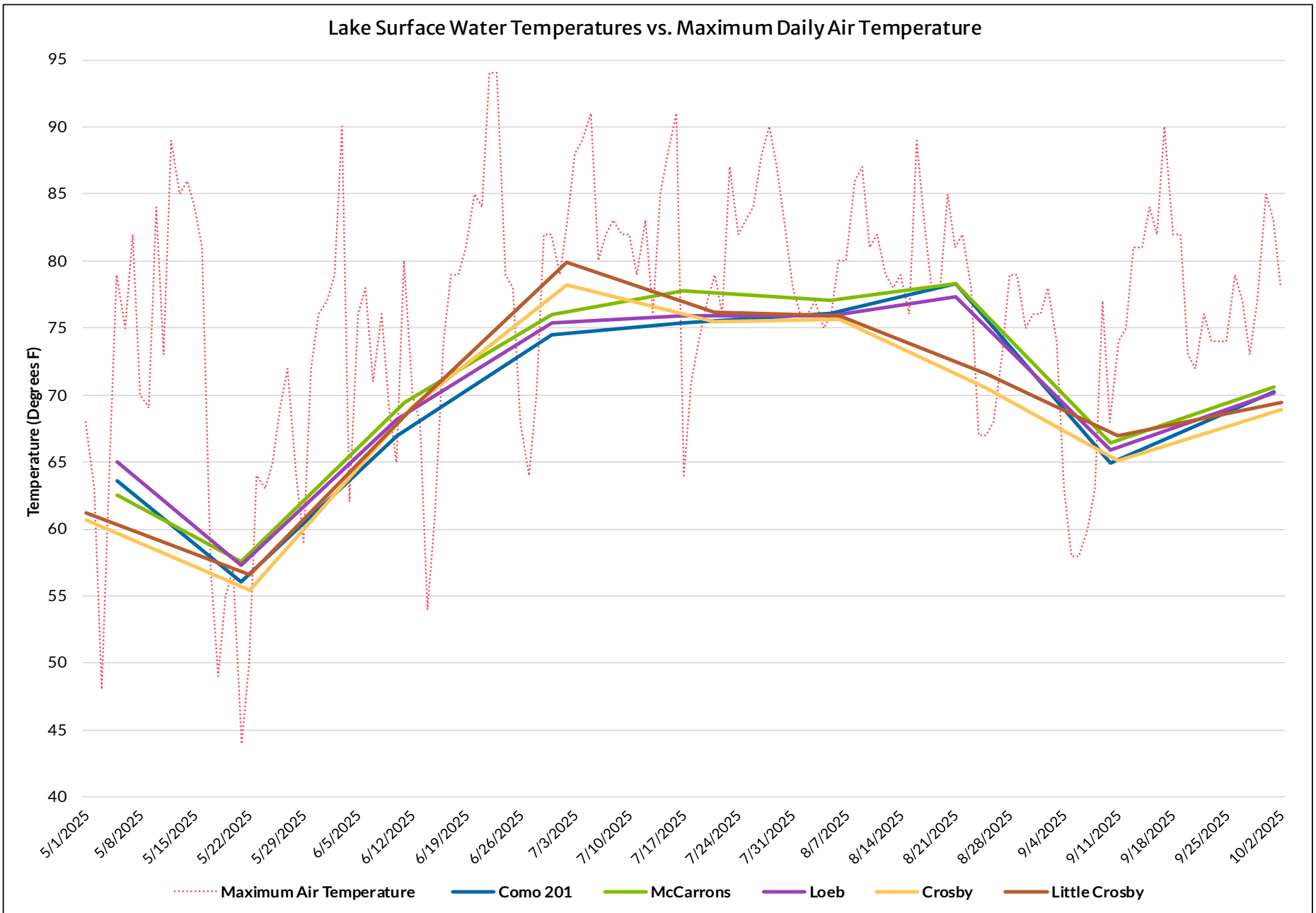


Figure 11: May-September 2025 biweekly surface water temperatures of CRWD lakes from RCPW and maximum daily air temperatures (F).

## 2.7 Notable Climatological Events

Overall, 2025 represented a less anomalous year than 2024 in terms of breaking and setting records, but there were still several notable events that occurred. Several days of cold weather from January 17-21 saw the lowest temperatures since February 2021, with the U of M reporting a low of -21 on January 20, and wind chills between -30 and -50 degrees statewide (DNR, 2025g). Not long after, a warm spell had the Twin Cities tying its daily record high of 47 degrees on January 28 and setting a new record high temperature at 52 degrees on January 30 (DNR, 2025h). The DNR states “over three dozen daily temperature records were broken or tied during this period” (2025h). These warm temperatures were, in part, due to the lack of snow on the ground, which helps to reflect sunlight and prevent the ground from heating up. Minnesota also experienced the deepest frost since 2019, another symptom of the lack of insulating snow on the ground (DNR, 2025i).

March set a record for highest temperature on record so early in the season, with the Twin Cities experiencing a high of 75 degrees on March 14 (DNR, 2025j). Another daily high temperature record was set on May 11 with a high of 90 degrees at MSP airport (DNR, 2025k). A heat wave occurring June 21-22 caused the Twin Cities to report two days in a row of lows of 80 degrees or higher for the first time since August of 2013 and set a new daily high temperature record of 96 degrees on June 21 (DNR, 2025l). October 4 set a daily record high temperature at MSP airport with 91 (89 at the U of M) which was the latest date on record to reach 90 or higher (DNR, 2025m). November 14 also set a record for the warmest temperature so late in the season at 72 degrees (29 degrees above normal) (DNR, 2025n).

Of particular note was the intensity of many of the precipitation events seen in 2025. Table 7 shows the three most intense rain events in 15-minute, 1-hour, and 24-hour intervals during 2025. These events were compared to the Atlas 14 precipitation frequency ratings to estimate the average recurrence interval of events (NOAA, 2025c). The most intense rainfall was on July 27, with 0.90 inches of precipitation in fifteen minutes, resulting in an Atlas 14 frequency rating of 5 years. The last time the District saw an event with an Atlas 14 rating of 5 years was in 2018. In addition to the highest fifteen-minute precipitation total of the year, July 27 saw the second largest daily precipitation total of 2025 of 1.76 inches.

One of the most intense 24-hour events of 2025 was on May 20 with 1.66 inches of rain. This was only part of a three-day event during which 2.70 inches of rain fell from May 19-21, making up nearly 80% of May’s total monthly precipitation for 2025 and nearly 70% of the normal monthly May precipitation. This led right into June which was the wettest month of the year in the District by far (2.70 inches more than normal), coming in at 1.15 inches more than June 2024, which set a record for fourth wettest June on record and the fifth wettest month overall in the state (DNR, 2024). The highest daily precipitation total was on June 25 with 2.54 inches of precipitation, which was the first time the District experienced a daily total of over two and a half inches since 2019.

Overall, 2025 was made up of numerous quick blasts of warm weather that helped set multiple new daily temperature records while keeping the average annual temperature below normal, and intense precipitation events contributed more to monthly totals than the more frequent, lower-precipitation events seen in 2024.

**Table 7: 2025 rainfall intensity statistics for 15-minute, 1-hour, and 24-hour events.**

Rainfall Intensity			Atlas 14 Rating
Time Period	Date & Event End Time	Amount (in)	Frequency (yr)
15-minute	7/27/2025 19:15	0.90	5
	8/16/2025 6:30	0.65	1
	9/18/2025 17:30	0.64	1
1-hour	7/27/2025 19:00	1.35	2
	8/16/2025 6:00	1.01	1
	9/18/2025 17:00	0.87	1
24-Hour	6/25/2025	2.54	2
	7/27/2025	1.76	1
	5/20/2025	1.66	1

## 2.8 Drought

According to the U.S. Drought Monitor, the District was free of drought for the majority of the year, with only mild drought conditions—categorized as “abnormally dry”—presenting in late February through March, briefly in mid-May, and mid-November through December. Minnesota was nearly completely drought-free at the beginning of August thanks to above-normal monthly precipitation in June and July, but early fall warmth and dry conditions kept the state from fully eliminating drought for a second year in a row. “Severe drought” was the highest intensity seen statewide in 2025, a stark difference from the last several years which have notably seen both “extreme” and “exceptional” levels of drought, especially from 2021-2023. Minnesota drought maps for January 7, April 1, July 1, August 12, October 14, and December 30 can be found in the Appendix.

### 3 Summary

A summary of 2025 climatological data and events can be seen in Table 8.

**Table 8: 2025 climatological data summary.**

<b>2025 Climate Summary</b>			
<b>Variable</b>		<b>Normal/Average</b>	<b>Notes</b>
Days over 90 degrees F	7*	13	6 days fewer than normal
Total Precipitation (inches)	30.30	31.62	1.32" less than normal
Water Year Precipitation (inches)	31.10	31.62	0.52" less than normal
Growing Season Precipitation (inches)	21.91	19.91	2.00" more than normal
Total Snow (inches)	39.4	51.2	11.80" less than normal
Last Significant Snowfall	4/2	N/A	
Last Spring date with greater than 1" snowpack	4/2	3/31	2 days later than normal
Winter Ice-In Date (Como)	12/2	Median: 12/6	4 days earlier than normal
Spring Ice-Out Date (Como)	3/22	Median: 3/28	6 days earlier than normal
Total number of ice-in days (Como)	110	117	7 days fewer than normal

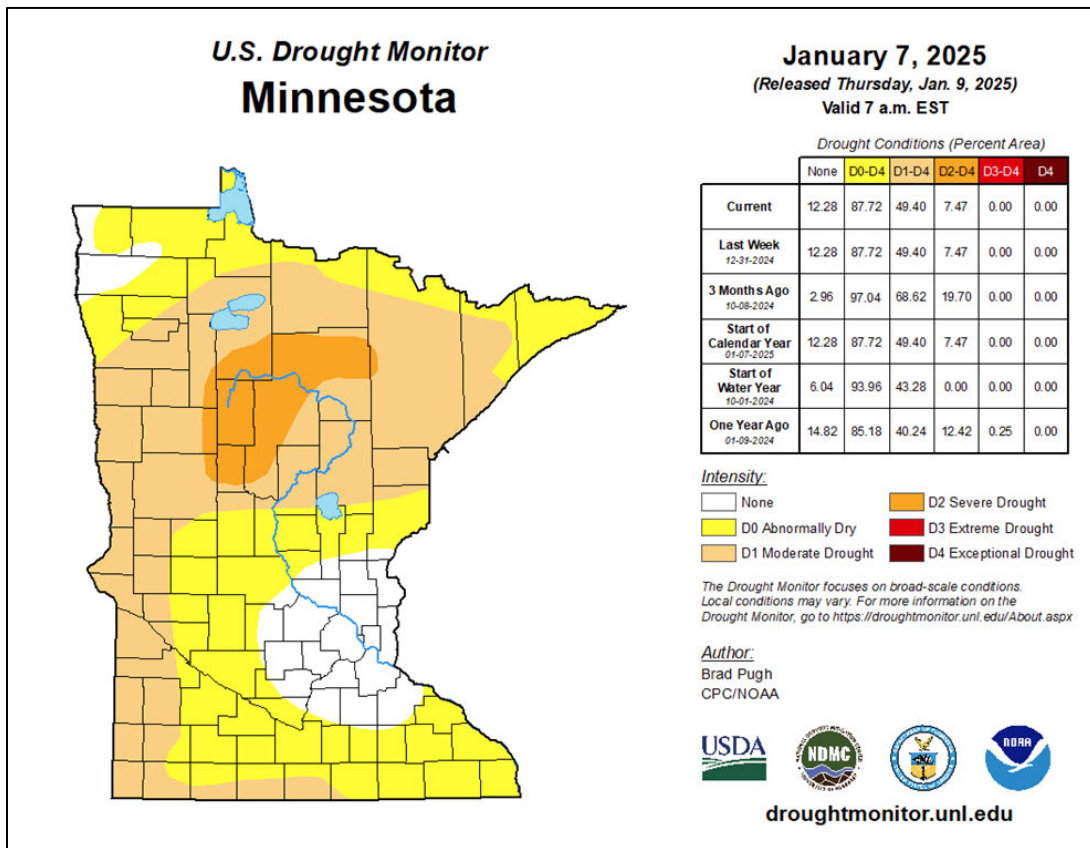
\*Based on U of M climate data.

## 4 References

- American Meteorological Society (AMS), 2025. Glossary of Meteorology: Water Year. Saint Paul, MN. Accessed online from [https://glossary.ametsoc.org/wiki/Water\\_year](https://glossary.ametsoc.org/wiki/Water_year)
- Midwest Regional Climate Center (MRCC), 2025. Cli-MATE. Accessed online from <https://mrcc.purdue.edu/newclimate/hourly/station>
- Minnesota Department of Natural Resources (DNR), 2024. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/very-wet-june-2024.html>
- Minnesota Department of Natural Resources (DNR), 2026. Climate Trends. Accessed online from [https://www.dnr.state.mn.us/climate/climate\\_change\\_info/climate-trends.html](https://www.dnr.state.mn.us/climate/climate_change_info/climate-trends.html)
- Minnesota Department of Natural Resources (DNR), 2025a. U of M St. Paul Campus Climate Observatory. Accessed online from [https://www.dnr.state.mn.us/climate/climate\\_monitor/climate\\_observatory.html](https://www.dnr.state.mn.us/climate/climate_monitor/climate_observatory.html)
- Minnesota Department of Natural Resources (DNR), 2025b. University of Minnesota Climate Data, National Weather Service Reporting Stations. Accessed online from [https://www.dnr.state.mn.us/climate/historical/acis\\_stn\\_data\\_table.html?sid=218450&sname=U%20NIV%20OF%20MINN%20ST%20PAUL&sdate=por&edate=por](https://www.dnr.state.mn.us/climate/historical/acis_stn_data_table.html?sid=218450&sname=U%20NIV%20OF%20MINN%20ST%20PAUL&sdate=por&edate=por)
- Minnesota Department of Natural Resources (DNR), 2025c. 2025 Lake Ice Out Dates. Accessed online from [https://www.dnr.state.mn.us/ice\\_out/index.html](https://www.dnr.state.mn.us/ice_out/index.html)
- Minnesota Department of Natural Resources (DNR), 2025d. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/index.html>
- Minnesota Department of Natural Resources (DNR), 2025e. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/warm-september-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025f. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/warm-fall-trend.html>
- Minnesota Department of Natural Resources (DNR), 2025g. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/cold-jan-17-21-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025h. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/record-warmth-jan-28-30-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025i. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/frost-depth-minnesota-winter-2025.html>

- Minnesota Department of Natural Resources (DNR), 2025j. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/record-warm-march-14-2024.html>
- Minnesota Department of Natural Resources (DNR), 2025k. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/fire-weather-may-10-13-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025l. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/heatwave-june-21-22-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025m. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/hot-october-4-5-2025.html>
- Minnesota Department of Natural Resources (DNR), 2025n. Minnesota State Climatology Office Climate Journal. Accessed online from <https://www.dnr.state.mn.us/climate/journal/record-warm-november-14-2025.html>
- National Oceanic and Atmospheric Administration (NOAA), 2025a. National Centers for Environmental Information (NCEI), Meteorological Versus Astronomical Seasons. Accessed online from <https://www.ncei.noaa.gov/news/meteorological-versus-astronomical-seasons>
- National Oceanic and Atmospheric Administration (NOAA), 2025b. National Centers for Environmental Information (NCEI), U.S. Climate Normals. Accessed online from <https://www.ncei.noaa.gov/products/land-based-station/us-climate-normals>
- National Oceanic and Atmospheric Administration (NOAA), 2025c. National Weather Service Hydrometeorological Design Studies Center Atlas 14 Point Precipitation Frequency Estimates: MN. Accessed online from [https://hdsc.nws.noaa.gov/pfds/pfds\\_map\\_cont.html?bkmrk=mn](https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=mn)
- United States Department of Agriculture (USDA), 2025. Growing Seasons in a Changing Climate. Accessed online from <https://www.climatehubs.usda.gov/growing-seasons-changing-climate>
- United States Drought Monitor, 2025. Minnesota. Accessed online from <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?MN>

# 5 Appendix

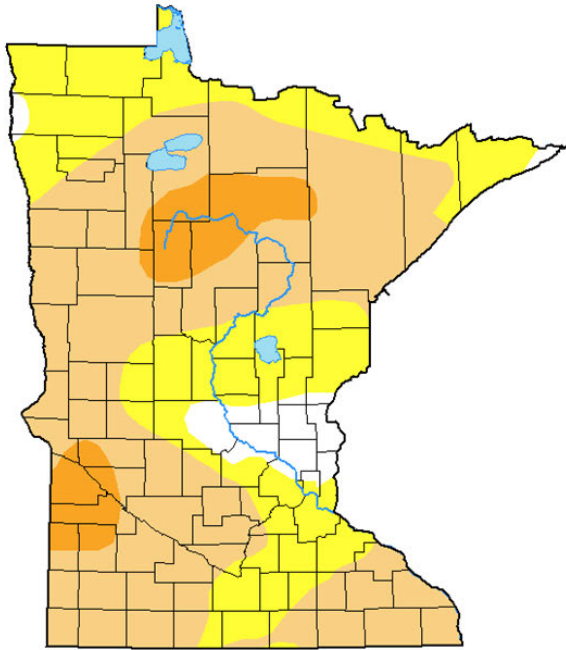


## U.S. Drought Monitor Minnesota

**April 1, 2025**

(Released Thursday, Apr. 3, 2025)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	5.07	94.93	62.65	8.75	0.00	0.00
<b>Last Week</b> 03-25-2025	5.07	94.93	66.43	8.75	0.00	0.00
<b>3 Months Ago</b> 12-31-2024	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Calendar Year</b> 01-07-2025	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Water Year</b> 10-01-2024	6.04	93.96	43.28	0.00	0.00	0.00
<b>One Year Ago</b> 04-02-2024	1.39	98.61	43.37	11.43	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

David Simeral  
Western Regional Climate Center



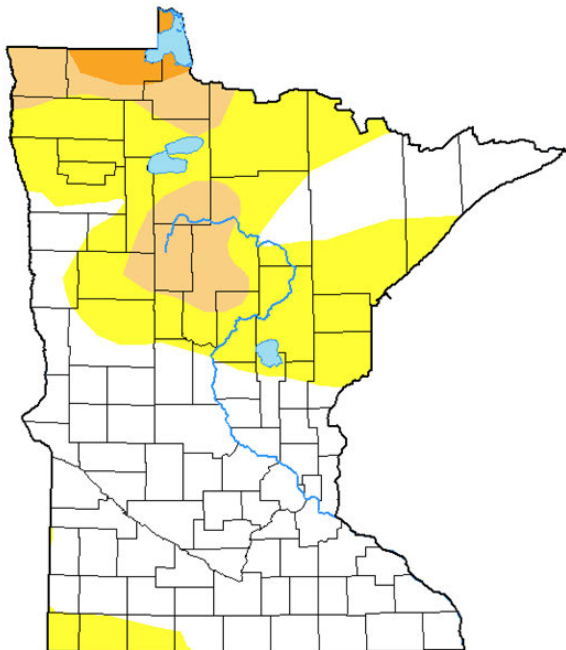
[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

## U.S. Drought Monitor Minnesota

**July 1, 2025**

(Released Thursday, Jul. 3, 2025)

Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	55.17	44.83	11.59	2.15	0.00	0.00
<b>Last Week</b> 06-24-2025	47.32	52.68	11.26	0.00	0.00	0.00
<b>3 Months Ago</b> 04-01-2025	5.07	94.93	62.65	8.75	0.00	0.00
<b>Start of Calendar Year</b> 01-07-2025	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Water Year</b> 10-01-2024	6.04	93.96	43.28	0.00	0.00	0.00
<b>One Year Ago</b> 07-02-2024	100.00	0.00	0.00	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

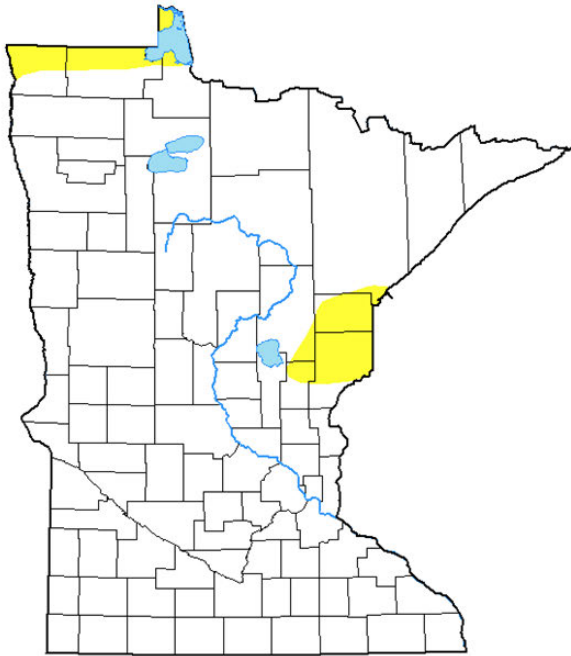
Author:

Curtis Riganti  
National Drought Mitigation Center



[droughtmonitor.unl.edu](http://droughtmonitor.unl.edu)

## U.S. Drought Monitor Minnesota



**August 12, 2025**  
(Released Thursday, Aug. 14, 2025)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	94.67	5.33	0.00	0.00	0.00	0.00
<b>Last Week</b> 08-05-2025	92.64	7.36	2.39	0.00	0.00	0.00
<b>3 Months Ago</b> 05-13-2025	17.31	82.69	22.37	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2025	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Water Year</b> 10-01-2024	6.04	93.96	43.28	0.00	0.00	0.00
<b>One Year Ago</b> 08-13-2024	100.00	0.00	0.00	0.00	0.00	0.00

**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

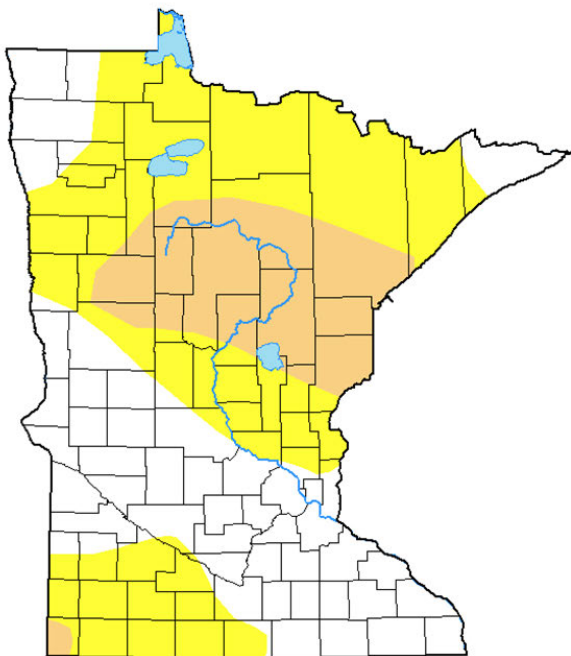
**Author:**

Richard Tinker  
CPC/NOAA/NWS/NCEP



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

## U.S. Drought Monitor Minnesota



**October 14, 2025**  
(Released Thursday, Oct. 16, 2025)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	37.55	62.45	18.68	0.00	0.00	0.00
<b>Last Week</b> 10-07-2025	42.81	57.19	12.46	0.00	0.00	0.00
<b>3 Months Ago</b> 07-15-2025	74.16	25.84	4.18	1.38	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2025	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Water Year</b> 10-01-2024	6.04	93.96	43.28	0.00	0.00	0.00
<b>One Year Ago</b> 10-15-2024	2.91	97.09	71.71	28.24	0.00	0.00

**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**

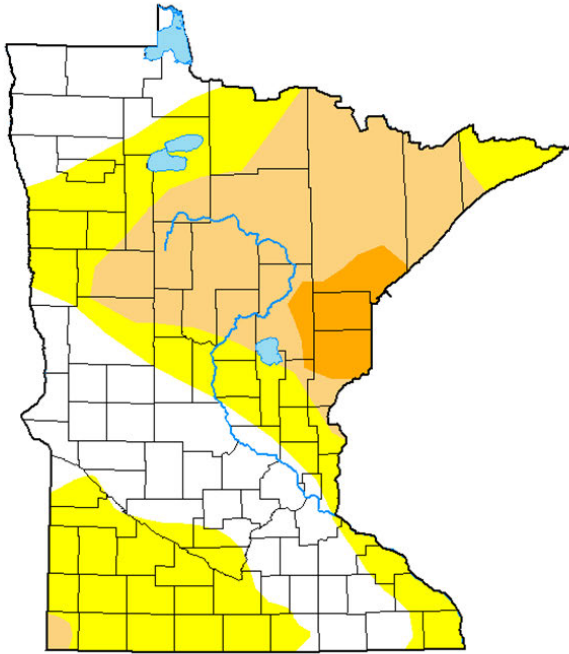
Richard Tinker  
CPC/NOAA/NWS/NCEP



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)

**U.S. Drought Monitor**  
**Minnesota**

**December 30, 2025**  
(Released Wednesday, Dec. 31, 2025)  
Valid 7 a.m. EST



*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	33.70	66.30	30.35	4.24	0.00	0.00
<b>Last Week</b> 12-23-2025	25.08	74.92	30.35	4.24	0.00	0.00
<b>3 Months Ago</b> 09-30-2025	65.35	34.65	3.01	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-01-2025	12.28	87.72	49.40	7.47	0.00	0.00
<b>Start of Water Year</b> 09-30-2025	65.35	34.65	3.01	0.00	0.00	0.00
<b>One Year Ago</b> 12-31-2024	12.28	87.72	49.40	7.47	0.00	0.00

**Intensity:**

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>*

**Author:**

Rocky Bilotta  
NCEI/NOAA



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)