

Central Indiana

April 2022

Climate Summary

Tied 55th Coolest on record at Indianapolis

Tied 43rd Wettest on record at Indianapolis

Tied 24th Snowiest on record at Indianapolis

Temperatures

April 2022 was rather cool, with most locations averaging 1 to 2.5 degrees below normal across central Indiana. This included several ~3-day periods, about once every ~8 days, of very cool conditions amid an otherwise consistently chilly pattern, with the only unseasonable warmth confined to the month's last full weekend. Daily temperatures at Indianapolis averaged 10 or more degrees above normal only **2** times - the **23rd-24th**; and averaged 10 or more degrees below normal on **5** other days: **9th**, **17th-19th**, **26th**. April 2022 continued the near- to below-normal pattern also seen during April 2020 and April 2021. The upper-levels brought many passing waves amid an overall zonal flow, except for occasional broad, deep troughs that favored the north-central US; this pattern promoted considerably cloudy and cool weather, often among approaching warm frontal zones.

April began as a deep storm system departed into southeastern Canada, allowing cold Canadian high pressure to plunge into the Mid-West in its wake. Most locations recorded their lowest daily maximum on the **1st**, including 44F at both Indianapolis and Bloomington and 45F at Terre Haute, while only **38F** was reached at the Rockville (Parke Co.) COOP site and only **40F** was managed at both the Kokomo 3 WSW (Howard Co.) and New Castle 3 SW (Henry Co.) COOP sites. The morning of the **2nd** was the month's coldest for most locales, with a hard freeze common across the region, and readings as low as **23F** at the Davis Purdue AG Center at Farmland 5 NNW (Randolph Co.). The rest of the first week saw a slight moderation to near-normal levels.

On the **7th-9th**, a deep, broad stacked low slowly crossed the Great Lakes, bringing persistent light rainfall and a robust and chilly west-northwesterly flow. Highs ranged from the mid-40s to around 50F, with the **8th** only climbing to **42F** at the Frankfort Disposal COOP station (Clinton Co.), and only to **44F** at Lafayette and places as far south as the Farmersburg TV-2 station (Sullivan

Co.), while the 9th's max temps were as low as 42F in Rockville, with 44F observed at both Muncie and Castleton 2 S (Marion Co.). Daily low temperatures trended from near 40F to near 30F; the morning of the 10th was the coldest - Indianapolis dropped to 30F, while Rockville's 25F was the lowest observation, with a hard freeze scattered through the rest of the region, and as far south as a 27F mark at the Oolitic Purdue Experimental Farm (Lawrence Co.).

The month's greatest warming then followed during the 10th's daytime as a quickly-arriving upper ridge helped to boost temperatures into the 60s to around 70F: Terre Haute climbed from 28F to 69F (for a change of +41 degrees) in just over 10 hours, while the Shoals 8 S (Martin Co.) COOP station's increase from 30F to 71F was also +41 degrees. Mild days followed on the 11th-13th as afternoon highs reached the mid 60s to low 70s for most locations: on the 12th Bloomington peaked at 73F, while it was 74F at the Seymour 1 WSW (Jackson Co.) CCOOP station, and Shoals 8 S reached 78F; on the 13th, Oolitic hit 77F and Indianapolis was 68F.

The most unseasonable cold of April 2022 occurred on the 17th-19th as two areas of polar high pressure pushed across the Mid-West in quick succession, with the second ridge advancing as far as the southeastern US. Morning lows were in the upper 20s to mid-30s, while daytime highs only reached the 40s on the 18th, while 50s were common on the 17th and 19th. The 17th and 18th saw temperatures at or below freezing over the northern/eastern half of central Indiana, with Farmland 5 NNW dropping to 26F and 27F, respectively, while Kokomo 3 WSW and Tipton 5 SW (Tipton Co.) were 27F on both mornings. The morning of the 19th brought a more widespread, yet milder freeze, as readings of 30F to 32F were common across the entire region, with 27F in Rockville, while Indianapolis dropped to 31F for its only freeze of the week. Maximum temperatures on the 18th were as low as 39F at both Kokomo 3 WSW and New Castle 3 SW, while Lafayette and Muncie only topped out at 42F; meanwhile 51F was reached at both the Southwest Purdue AG Center at Vincennes 5 NE (Knox Co.) and Shakamak State Park (Sullivan Co.).

Very warm conditions then graced central Indiana on the 23rd-24th courtesy of robust south-southwesterly flow between the remnant surface high along the Atlantic coast and a late-winter storm system deepening over the northern Plains. Mid-80s were the rule on the 23rd, with 86F reported across all corners of the realm - from Shelbyville and Indianapolis - Eagle Creek to Shoals 8 S and Tipton 5 SW, while lowest maximums were found at a few sites in Clinton and Tippecanoe Counties that only reached 79F. Castleton 2 S' 85F was the "highest April max since 2002"; as was the case for Indianapolis' 84F, however, Indy's April maximum historically averages 81F, with the month having topped out in the 79-83F range in each of the past 9 years (2013-2021). The 23rd also had the mildest overnight of the month, as readings only dropped into the 60s, with the highest minimum observed at Shoals 8 S (70F), while Shelbyville and Muncie only dropped to 67F, and Indianapolis observed 63F.

The 24th's max temps were not as warm yet still well above normal, led by 84F at several sites, including Shelbyville and Washington 1 W (Daviess Co.), while Indianapolis peaked at 81F. A cold frontal passage during the overnight of the 24th started a quick transition to a couple more days of well below normal temperatures.

Another polar mass of high pressure crossed the Great Lakes during the 26th-28th, with central Indiana catching the milder, southern periphery of this chill. Morning lows on the 26th and 27th dropped into the 30s, although sub-freezing temperatures were isolated; lowest readings being

29F on the **27th** (at Farmland 5 NNW and Kokomo 3 WSW), and **30F** on the **28th** (at Tipton 5 SW and Crawfordsville 6 SE (Montgomery Co.)). The **26th** featured the coldest afternoon of the week, with readings ranging from **50F** at Farmland 5 NNW to 64F at Elnora (Davies Co.).

April 2022’s slightly below normal temperatures continued the trend since April 2020’s slightly below normal and April 2021’s near normal readings. Yet, April 2022 was in contrast to the noticeably mild March 2022.

Site	April 2022 Average Temp	April 2022 Dep from Nml	Highest Temperature	Lowest Temperature
Indianapolis Int’l Airport	51.5	-2.2	84 on 23 rd	29 on 2 nd
Lafayette	49.6	-1.5	83 on 23 rd	28 on 2 nd , 10 th
Muncie	51.4	-2.2	85 on 23 rd	24 on 2nd
Terre Haute	52.8	-1.2	84 on 23 rd	26 on 2 nd
Bloomington	52.6	-1.7	85 on 23 rd	26 on 2 nd
Shelbyville	53.7	-0.8	86 on 23 rd	30 on 10 th
Indianapolis Eagle Creek	51.9	-1.7	86 on 23 rd	27 on 2 nd

At Indianapolis, April 2022’s daily average temperatures were above normal on 12 days and below normal on 18 days. It was the (tied) 55th coolest April for the Indianapolis Area since weather records began in 1871, placing it in the 36th percentile of all recorded Aprils.

Precipitation

Following the release of the new 30-year climatological normals (1991-2020), April is now typically the fourth-wettest month across most of central Indiana, normally totaling significantly more precipitation than March, yet less than May, June or July. Exceptions to this pattern are found across the region’s southern counties where April ties May as the year’s climatologically rainiest month at Terre Haute, while at Bloomington April falls in second behind June, and at Shelbyville it is normally the third-rainiest month after May and June. The previous 30-yr normals (1981-2010) had placed April as only the 4th-wettest at all seven 1st-order sites.

The region’s typical north-south precipitation gradient is normally present in April, ranging from just under 4” across the far northern counties to just over 5” along far southern zones. Although this difference is proportionally less than that normally found in the January-March period – this follows the trend into more uniform precipitation across central Indiana through May-August. Despite measurable rain falling on 17 to 19 days, April 2022’s totals were generally about an inch below these normals; although locations through several central counties finished the month

with near to slightly above normal precipitation totals. **4.42"** fell at Indianapolis International Airport, which was essentially at normal. Despite monthly totals generally modest compared to normals, April 2022 was the wettest April of the last three years.

Minor **river flooding** carried over from March 2022 on the Wabash River from Montezuma down to Riverton. Flooding ended on the night of the **4th** at Montezuma and Terre Haute; and despite light rains finally ended at Riverton early on the **6th**, after over two weeks of flooding at this site. Following several days near bankfull conditions, Vincennes' river stage teetered at or just into minor flood from pre-dawn on the **3rd** to the morning of the **5th**.

Daily widespread light rains fell over central Indiana from the **5th** through early on the **9th**. 1-day totals were as high as 0.65" through dawn on the **6th** at Clay City (Clay Co.), and 0.59" through dawn on the **7th** at Hymera (Sullivan Co.); although reported 4-day totals were no greater than the isolated 0.90-0.98" reported across Sullivan, Owen, and Tippecanoe Counties. The **11th** found more widespread light to moderate rainfall, around a lone heavier observation of **1.06"** at the Bowling Green 1 W COOP site. The generally damp mid-month pattern finally produced more appreciable rains on the **13th**, with 0.50-**1.70"** common across the region, an **1.90"** observation near Mooresville (Morgan Co.), and reports near/above **1.50"** common across Lawrence, Martin and Monroe Counties.

Following this more impressive rainfall, a few site specific **river sites flooded** on the **14th** from pre-dawn to afternoon hours, namely, the Mississinewa River at Ridgeville, Flatrock River at Raleigh, and Beaver Creek at Shoals. Main stem river flooding soon followed on most of the lower White River: Elliston, Edwardsport, and Petersburg entered flood stage on the **14th**, with Hazleton following on the **15th**. The associated crest flowed from Elliston at dawn on the **15th** down to Hazleton by pre-dawn on the **18th**. Minor flooding ended at Elliston on the morning of the **16th**, and at Edwardsport on the **18th**, with points along southern Knox County ending ~6 days in flood on the **20th-21st**. Isolated flooding was also observed along other main stem rivers: the East Fork of the White at Seymour flooded from the **14th-16th**, while the Wabash at Montezuma flirted with the minor flood threshold for ~6 hours early on the **16th**.

Several more days of widespread light rainfall occurred within the **17th-20th**, with no 1-day readings exceeding ~0.50"; the greatest 4-day totals of 0.60-0.90" were over south-central zones, especially Monroe and Lawrence Counties. April's last week then started with a broad swath of moderate to heavy rainfall on the **24th** over all but southeastern counties; with the greatest observations along a narrow axis from **2.93"** at Vincennes 5 NE, through **1.93"** just south of Ellettsville (Monroe Co.), to **1.43"** in Greenwood (Johnson Co.). Following additional light to moderate rain on the **25th**, numerous 2-day totals of 0.80-**2.00"** were seen near and between the I-70 and I-69 corridors, with **3.11"** at Vincennes 5 NE, as well as **2.21"** northeast of Bloomfield (Greene Co.). **Isolated flooding** followed, with Youngs Creek at Amity reaching minor flood from the afternoon of the **25th** to dawn on the **26th**, while the White River at Edwardsport spent 2.5 days in flood over the **26th-28th**.

The month closed with one final rainy day on the **30th** as scattered afternoon showers led to several rounds of evening thunderstorms, which made for the month's greatest 24-hr totals over northern portions of the Indianapolis metro and points northeastward: **2.16"** near Sheridan

(Hamilton Co.), **2.14"** in Williams Creek (Marion Co.), and **2.05"** just north of Anthony (Delaware Co.).

Late winter **light snows** and/or mixed precipitation occurred on several days, when promoted by nocturnal timing, and with organized accumulating snowfall generally confined to the Interstate 74 corridor and north. Rain had just changed to snow as the month began early on the **1st**. As noted by Bob McLain at Castleton 2 S, "snow melted as it landed", with only a very thin coating reported across many northern and central counties, and isolated $\sim\frac{1}{2}$ " amounts in the Lafayette and Carmel areas. Very early on the **9th**, rain mixed with or changed to various frozen precipitation types, including sleet, graupel, and eventually snow, dropping a dusting from Lafayette to Muncie, with as much as **0.6"** at Kokomo 3 WSW, before tapering off during the morning. The month's greatest snowfall came on the **18th** from briefly-potent early morning snow showers, which brought a broad patch of **1-2"** from the Lafayette area to northeast counties, while embedded narrow, heavier bands lead to reports of **2.9"** near New Ross (Boone Co.) and **2.7"** at New Castle 3 SW. A mixture of rain at the onset limited snowfall south of Interstate 70 to generally a light coating; amid this north-south gradient, Indianapolis officially observed **1.0"** (which was all of Indy's measureable snowfall for April).

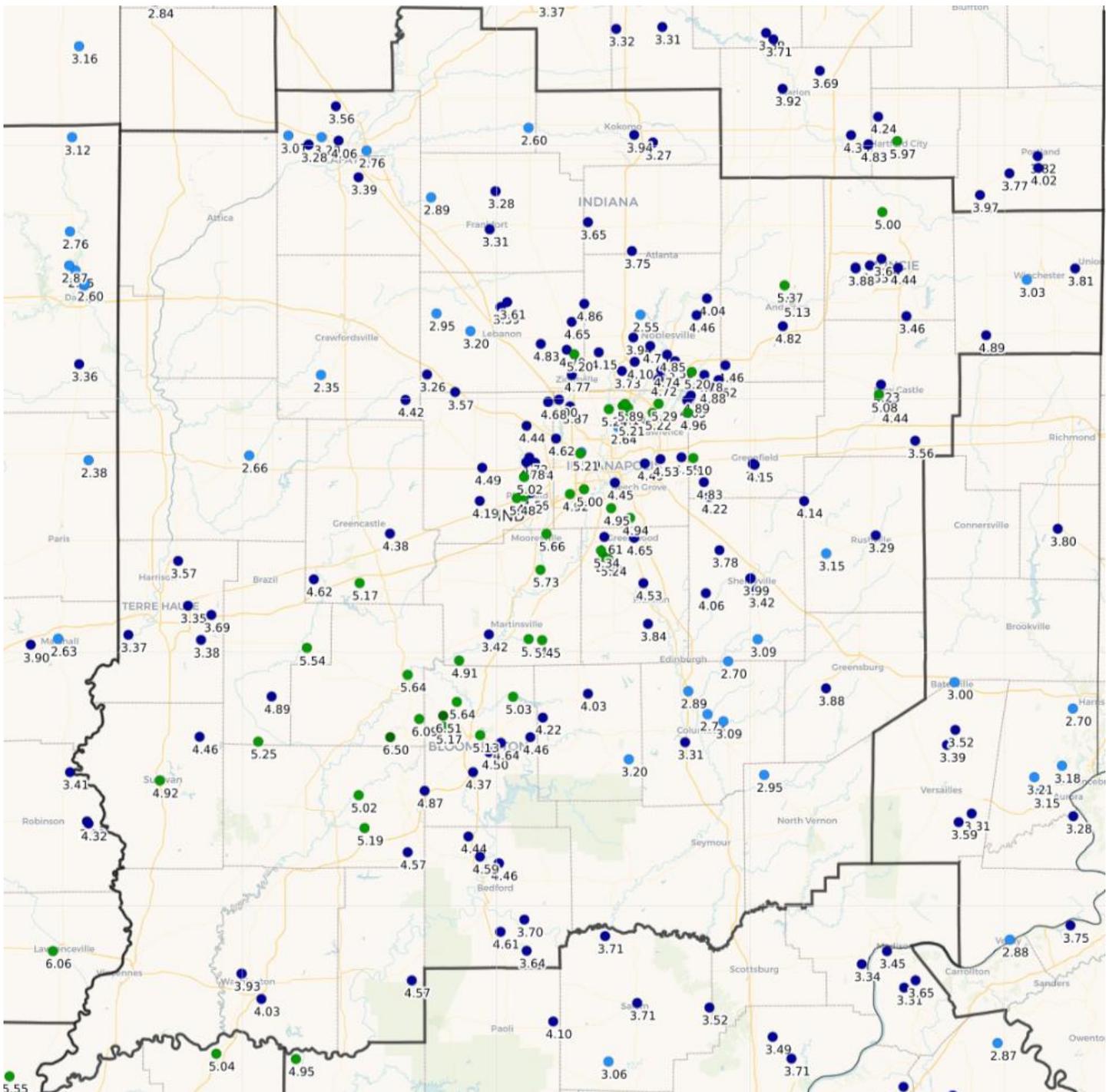
In summary, precipitation was frequent, but nevertheless for most locations sub-normal, with these generally slight deficiencies due to lack of stronger thunderstorms. While April normally sees 11-13 days with measurable rain, this was surpassed by 8 days at Terre Haute and 5-6 days elsewhere. However, there are normally ~ 8 days with 0.10"+ of rain -- Terre Haute and Bloomington both totaled 11, while the five other 1st-order sites were overall near this normal; thus the above normal frequency of days with measureable rain was led by very light rainfalls. April 2022's generally slightly below normal precipitation continued the pattern from April 2021's rather dry conditions, while countering the trend from March 2022's plentiful totals. The year-to-date total at Indianapolis rose to **14.80"**, a surplus of **1.22"** above normal.

Site	April 2022 Precipitation	April 2022 Dep from Nml	Wettest Day	Longest Dry Stretch
Indianapolis Intl AP	4.42	+0.02	1.04 on 13 th	2 days, 22-23 rd , 26-27 th
Lafayette (*)	2.01INC	M	M on 13 th	2 days, 16-17 th , 26-27 th
Muncie	2.99	-0.90	0.98 on 25 th	2 days, 26-27 th
Terre Haute	3.34	-1.37	0.77 on 13 th	2 days, 3-4 th , 26-27 th
Bloomington	4.71	-0.23	1.41 on 25 th	2 days, 3-4 th , 26-27 th
Shelbyville	3.42	-1.12	1.34 on 25 th	2 days, 26-27 th
Indy - Eagle Creek	4.54	+0.46	1.16 on 30 th	2 days, 26-27 th

(*) Lafayette's observed precipitation was incomplete

April 2022 was the (tied) **43rd wettest** in the Indianapolis Area since weather records began in 1871, placing it in the 72nd percentile of all recorded Aprils.

April 2022 Total Precipitation, Through the Morning of 5/1/2022 As Reported By Central Indiana CoCoRaHS Observers



For the period 700 AM EDT 4/1/2022 -to- 700 AM EDT 5/1/2022. Data is unofficial.

Totals were greatest (4.00-6.50") along and near the I-69 corridor. Minimum values (2.00-3.00") fell over several northwest and a few southeast counties. Most of the region was at least slightly below normal.

Severe Weather

The several days of severe reports included damaging winds impacting several counties on April **13th**, as well as isolated events on the **12th**, **15th**, **23rd**.

On the **13th**, moist lower levels combined with a deep trough over the Mid-West to promote a line of strong storms over southern central Indiana by the early evening. These cells further organized into a squall line whose bowing segments lead to damaging straight line winds, including significant damage to both boat docks on Lake Monroe (Monroe Co.), and the Country Squire Lakes trailer park (Jennings Co.). An associated region of broad rotation eventually lead to the squall line spawning a brief **EF-0 tornado** west of Millhousen (Decatur Co.), with the only damage being to a lean-to roof and wall on a farm outbuilding, while a small horse trailer was picked up and thrown northward.

On the **12th**, elevated late morning thunderstorms produced a gust of **59 mph** at Indianapolis Int'l Airport. The **15th** found weak early evening showers produce briefly strong wind gusts courtesy of very dry, and relatively warm, low-levels; including a gust of **61 mph** at the Delaware County Airport. Lastly, April **23rd**'s breezy, non-severe-magnitude winds unfortunately downed a large dead tree in the Indian Oaks Campground (Owen Co.), killing two children.

For info on severe weather in other areas during April, visit the Storm Prediction Center "Severe Weather Event Summaries" website at spc.noaa.gov/climo/online

Miscellaneous – Winds, Thunder, Fog & More

April 2022 found occasional strong and a couple severe wind gusts across the seven 1st-order airports from the **11th** to the **24th**. Indianapolis observed **59 mph** from the south-southwest on the **11th** (see severe section above, then Muncie recorded **61 mph** from the west on the **15th**. Also noteworthy was Lafayette's gust to 50 mph on the **14th**. Peak gusts of 45-50 mph were common on the **15th**, as were gusts as high as 40-48 mph on both the **20th** and **24th**. Yet most notable were the **26 days** at Indianapolis when the wind gusted to 25+ mph – this was the greatest frequency of any month at Indianapolis since at least July 2018, and well above the second highest count of these last ~4 years, which was only 22 days in March 2021.

Fog was frequent amid the rather damp conditions, ranging from 12 days to as many as 15 days at Indianapolis and Terre Haute. All seven 1st-order airports observed fog on the **5th**, **6th**, **9th**, **13th**, and **21st**, with fog also common on the **1st**, **8th**, **11th**, **12th**, **18th**, **22nd**, **24th**, **25th**, and **30th**. Dense fog was rare, only being reported on the **12th** at Muncie and Indianapolis – Eagle Creek, on the **13th** at Bloomington and on the **22nd** at Shelbyville.

Thunder frequency rather modest for mid-spring, ranging from 2 days at Muncie to 5 days at Bloomington, with most 1st-order sites reporting thunder on 4 days. Thunder was common on the **11th, 13th, 24th and 25th**, and all 1st-order sites observed thunder on the **30th**.

While not as common as March 2022, the relative humidity did reach very low levels during the early to mid afternoon of the **15th**, including 13% at Muncie, 16% at Shelbyville, and 17% at Indianapolis. The associated dry lower levels of the atmosphere contributed to the rather potent wind gusts produced by otherwise weak rain showers early that evening (see severe section above).

Central Indiana's many COOP observers also provided several noteworthy remarks with their daily reports. Spencer (Owen Co.) observed frost on the mornings of both the **2nd and 6th**. On the **13th**, the Oolitic Purdue Farm (Lawrence Co.) reported "a few pieces of small, pea sized hail about 7 p.m." The morning of the **27th** found frost reported at Tipton 5 SW as well as "patches of light frost" at Castleton 2 S. Lebanon 6 W (Boone Co.) remarked "breezy" or "windy" on 16 days, including the **8th-10th and 15th-20th**. Lastly, Bob McLain noted Castleton 2 S's barometer readings for the month ranged from 29.53" (**6th**) to 30.41" (**22nd**).

May 2022 Outlook

The official outlook for May 2022 from the Climate Prediction Center indicates equal chances of above, below, or near normal temperatures for central Indiana. The normal May temperature for Indianapolis is **62.7** degrees.

The outlook also indicates equal chances of above, below, or near normal precipitation for the region. The normal May precipitation at Indianapolis is **4.75"**.

Data prepared by the Indianapolis Weather Forecast Office's State Climate Team

Questions should be referred to nws.indianapolis@noaa.gov