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## Indiana State Climate Office

### Monthly Weather Report



<http://www.iclimat.org>

**Jun 9, 2017**

## May 2017 Climate Summary

### Month Summary

May was yet another active weather month with 11 days of severe weather. Natural hazards included multiple rounds of locally flooded roads and homes, wind and hail damage, scattered frost, and 4 confirmed tornadoes. Only 2 injuries were reported. Water rescues were required. The month was slightly cooler than normal with an abundance of rainfall that stalled spring planting. Some replanting of submerged crops may be necessary.

The May state average temperature was 61.3°F which is 0.7°F below normal. This ranks as the 55<sup>th</sup> coolest May on record. Some recent cooler Mays include last year at 60.6°F, tying 1958 as the 51<sup>st</sup> coolest May. Go back another 8 years to find the next most recent year with a cooler May than 2017 with 58.1°F in 2008, which tied 1989 as the 20<sup>th</sup> coolest May. Between 2000 and 2008 there were 4 years with cooler Mays than 2017: 2002, 2003, 2005, and 2006. The coolest May on record was in 1924 with a state average temperature of 54.7°. The day split in May 2017 was 16 days of below normal temperature, 13 days above normal, and 2 days at normal. On 2 days each the daily state mean temperature was at least 10°F above normal and 10°F below normal. The highest temperature of the month was 93°F at Farmland 5 nnw on May 18<sup>th</sup>. The coolest was 28°F on May 8<sup>th</sup> and 9<sup>th</sup> at several locations.

May state precipitation averaged 6.94" which is 2.54" above normal, making it the 12<sup>th</sup> wettest May on record since 1895. The only wetter Mays since 2000 were May 2002 with 7.10" as 8<sup>th</sup> wettest and May 2004 with 7.17", ranking as the 7<sup>th</sup> wettest May on record. The wettest May since 1895 was in 1943 with the state average 8.62" of rainfall. The heaviest single day precipitation among cooperative network stations in May 2017 was 4.54" recorded on May 25<sup>th</sup> at the Berne water plant. The highest in the CoCoRaHS network was 6.19" on May 20<sup>th</sup> at Salem 0.5 ne. The largest month total precipitation in the cooperative network was 10.53" at Carmel 3 e. In the CoCoRaHS network the greatest month total was 18.32" at Indianapolis 9.5 ne. Widespread precipitation fell on about 15 days this month.

Regionally April 2017 precipitation totaled nearly 170% of normal across northern Indiana, 180% in the central part of the state, and 130% of normal in the south. Normal May precipitation ranges from 3.8" in northeast Indiana to 5.0" in the south central section of the state.

## May 1<sup>st</sup> – 7<sup>th</sup>

A cooling trend with heavy rainfall the final days of April continued the first week of May. Indiana temperatures fell day by day as did the persistent precipitation. Two intense low pressure systems in the upper atmosphere passed near Indiana in turn, keeping weather conditions cool and very wet. The heavy rainfall produced flooding in central and southwest Indiana, closing many local roads and cancelling outdoor activities. A benefit of the soggy weather was the elimination of abnormally dry soils statewide. But dry soils became saturated soils, suspending spring planting on Indiana farms.

Indiana temperatures on May 1<sup>st</sup> were near normal. An early morning warm front was followed quickly by a cold front racing through the state as the core of the storm sat over Chicago. On the next day the storm headed northeast to Canada but a trough remnant of the storm dropped more rain across Indiana. The state temperature dipped to 5°F below normal, the start of a slide into a cold spell.

On May 3<sup>rd</sup> a weak cold front from Hudson Bay reached Indiana, lowering the state temperature to 8°F below normal. A stationary front formed along a line from Arkansas to North Carolina. The cold front dissolved the next day. The stationary front lifted north to the Ohio River as a warm front, releasing heavy rains over Indiana as moisture overran the front. The state temperature held steady.

A storm system over west Tennessee drifted to east Kentucky on May 5<sup>th</sup>. Rain over Indiana persisted another day with the storm center still close by. The state temperature continued holding at 8°F below normal. This entire storm system left the region and moved to the Atlantic coast the next day. A reinforcement of cold air dove south from Canada to the Midwest. A new storm system formed over Illinois with its warm front touching the Ohio River near southwest Indiana. This front generated another round of heavy showers across Indiana. The Canadian cold helped resume the state temperature fall to 10°F below normal.

Cold air continued to pour into Indiana on May 7<sup>th</sup>. The cold front plunged to the southeast states. The week closed with the Indiana temperature at 10°F below normal. With the departure of the warm moist air rainfall slowed over Indiana.

Overall for the week the state temperature averaged to 7°F below normal. Normally in this first week of May daily maximum temperatures should range from 66°F in far northern counties to 74°F in the southwest corner of the state. Daily minimums typically vary between 45°F and 51°F. The warmest temperature among stations in the cooperative station network this week was 82°F at Brookville on May 1<sup>st</sup>. The coolest temperature in this same network was 28°F at Wanatah 2wnw on May 3<sup>rd</sup>.

Rain was recorded on all 7 days and fell heavily statewide on May 1<sup>st</sup>, 4<sup>th</sup>, and 5<sup>th</sup>. Rain fell mostly in northern Indiana on May 3<sup>rd</sup> and in the south on May 7<sup>th</sup>. On the weekly precipitation map rainfall was very heavy generally along a line from Indianapolis to Vincennes with totals in the range of 4" to 6". In contrast less than 2" was found in northwest and northcentral Indiana. Elsewhere 2" to 4" was common. Regionally about 2.3" fell across northern Indiana, 3.4" in central, and 3.1" through the south. These amounts equate to about 320% of normal in northern counties, 370% in central sections, and 260% of normal across the southern third of the state.

The heaviest single rain amounts were noted on May 5<sup>th</sup> when a CoCoRaHS observer northeast of Indianapolis measured 4.67” that morning. Near Paragon another volunteer had 2.87” and 2.80” was caught in rain gages at Fortville and Carmel. Weekly sums were very large. The observer outside Indianapolis tallied 9.09” while 6.64” was summed near Paragon. In Washington 5.69” was accumulated and 5.67” was noted in Martinsville. In Ellettsville the weekly total was 5.56”. All these amounts exceed the normal totals for all of May let alone one week!

Severe weather occurred on 3 days this week. With rain falling on already saturated ground due to torrential rainfall in late April, flooding was a common theme.

On May 4<sup>th</sup> wind gusts interrupted electrical power in Vanderburgh county.

On May 5<sup>th</sup> travel advisories were issued in 10 central Indiana counties and a few others in northern and southern parts of the state. Flood warnings were issued in many counties. A few state roads were closed by high water in Tippecanoe county while county roads in Clinton county were hard hit. Carroll county was put on a travel watch.

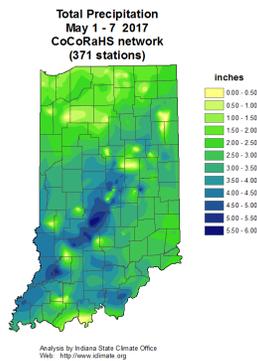
Schools were cancelled and some events postponed in central Indiana. In Hamilton county a Noblesville city street was closed along with 13 county roads covered by high water. Sandbags were made available to Madison and Hamilton county residents. Campers fled a state campground after an entrance was closed by high water.

A car submerged by flood waters in Monroe county was rescued by officials. The driver had already escaped. A second car was stalled in flood waters but this vehicle was pushed by its passengers to higher ground. No one was injured in this incident.

Rivers peaked on May 6<sup>th</sup> in Tippecanoe county but few homes had water problems. A water rescue was made in south central Indiana. A woman was pulled from a submerged car by Bartholomew county officials. She escaped with minor injuries. The travel ban of the day before was doubled to 20 Indiana counties.

There was a bit of good news among the flood stories this week. The plentiful rainfall erased all traces of Indiana acres with abnormally dry soils. According to the May 2<sup>nd</sup> edition of the US Drought Monitor, all remaining D0 category soils in Indiana had been washed away by the widespread flooding. All of Indiana has returned to normal soil moisture status.

The May 8<sup>th</sup> edition of the Indiana Crop Weather Bulletin noted that the stormy week brought cool temperatures and heavy rainfall to the state, halting fieldwork and slowing crop growth. There was little planting done and emerged corn and soybeans were yellow or underwater. Some farmers had already decided to replant and have bought more seed. Some wheat fields were flattened by high winds. Some livestock had foot soreness due to wet feed lot conditions. Many fields were ponded. Recently planted corn and soybeans were damaged by pockets of freezing temperatures this week



## May 8<sup>th</sup> – 14<sup>th</sup>

Indiana temperatures recovered to near normal after a cold start to May last week. Rainy weather continued although amounts weren't nearly as heavy as a week earlier. Wind damage occurred on May 10<sup>th</sup> across central Indiana, generally along a line from Terre Haute to Greensburg. Saturated fields slowed spring planting which frustrated farmers, some who must decide whether to start over and replant some of their drowned crops. Frost nipped some fields in northern Indiana this week.

It was quite cold on May 8<sup>th</sup> as the week began with the state temperature at 9°F below normal. A ridge stretched from Hudson Bay through Indiana, delivering sunny and cold weather with light winds to the state. The next day a storm center moved into Iowa, extending a stationary front through Illinois and southwest Indiana. Warm moist air began to overrun the front, reloading the atmosphere for a new rainy spell. The warmer air kicked in a warming trend. The state temperature rose to 5°F below normal.

The old ridge had moved east and remained strong, resisting significant movement of the stationary front on May 10<sup>th</sup>. This boundary between cooler air north of the front and warm moist air to its south triggered storms with wind damage across central Indiana. The state temperature did get a boost to 4°F above normal. The stationary front drifted north the next day to central Indiana but rainy weather and northerly winds behind a low center which moved east into Ohio lowered the Indiana temperature for the day to 2°F below normal.

A new storm center moved southeast to Arkansas on May 12<sup>th</sup> and tugged the Indiana stationary front south into Kentucky. The Indiana state temperature held at 2°F below normal. The Arkansas storm complex moved to Alabama the next day and out of the Indiana weather picture. Kansas high pressure sprawled east into Indiana, bringing in clear skies and calm winds. This marked the end of the rainy spell and helped resume the Indiana temperature rise to 2°F above normal.

On May 14<sup>th</sup> high pressure over Indiana relented and moved south to Tennessee. This allowed a Canadian cold front to reach northern Indiana. Mostly sunny skies around the state allowed the temperature momentum to continue. The state temperature wrapped up May 14<sup>th</sup> at 5°F above normal.

For the week the Indiana state temperature averaged 1°F below normal. Usually in the second week of May the daily maximum temperature should range between 68°F and 75°F north to south across the state. Daily minimums normally vary from 47°F in far northern counties to 53°F in the southwest corner of the state. The warmest temperature among cooperative network stations this week was 88°F at Shoals 8s on May 11<sup>th</sup>. The coolest temperature among stations in this same network was 28°F at several locations on May 8<sup>th</sup> and 9<sup>th</sup>.

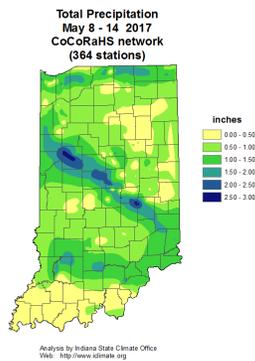
Rainfall was reported on five consecutive days from May 9<sup>th</sup> – May 13<sup>th</sup>. Only on May 11<sup>th</sup> was statewide coverage noted. On May 9<sup>th</sup> and 10<sup>th</sup> a northwest to southeast rain pattern was reported while rain fell across the southern half of Indiana on May 12<sup>th</sup> and in the Ohio River counties of southwest and south central Indiana on May 13<sup>th</sup>. No rain was recorded on the remaining two dates. Regionally about 1.0” fell across northern and southern Indiana and 1.1” in the central counties. These amounts equate to about 130% of normal in the northern third of Indiana, 120% in central sections, and 90% of normal across the southern part of the state.

On the weekly precipitation map between 0.5” and 1.5” was the most common rainfall total among CoCoRaHS stations. A heavier band between 1.5” and 3.0” was noted between Fowler and Rushville. Less than a half inch fell within a triangular area enclosed by Fort Wayne to Rochester to Hartford City, and in southern Indiana generally south of a Hazleton to Scottsburg line.

The heaviest single day amounts were observed in the morning reports on May 9<sup>th</sup>. In Lafayette and near Whitestown 2.05” was measured. Near Lafayette 1.98” was collected while the volunteer at Otterbein had 1.94”. Over the entire week 2.90” was summed near Morristown with 2.83” near West Lafayette and 2.76” in Lafayette. The Otterbein observer tallied 2.72” while north of Indianapolis 2.38” was caught.

High winds caused damage in nine counties along a frontal boundary in central Indiana on May 10<sup>th</sup>. Winds were reported in the 60 mph to 65 mph range. In Knox county wind gusts broke trees while one tree crashed through a car window. A tree fell on a house in Monroe county. Fallen trees blocked roads in Owen and Monroe counties. Trees downed power lines and knocked out electricity to residents of Clay and Morgan counties. In Hendricks county high winds tore the roof off a warehouse and brought down some of its walls. The wind toppled trees and power poles in Jackson and Johnson counties. Damage was limited to fallen trees in Shelby and Decatur counties.

The USDA Indiana Crop Weather report of May 9<sup>th</sup> notes that planting progress was slow this week. Replanting may be needed where field ponding and soil compaction were problematic. Temperatures in the upper 20s led to frost damage in spots around northern Indiana. Overall fields remained saturated from the previous week and were unworkable. Hay was in good condition.



## May 15<sup>th</sup> – 21<sup>st</sup>

Temperatures ramped up the first half of the week in Indiana until a cold front lowered them again to near normal. Rainfall took a break for a few days before returning along with cooler weather. Rainfall was heavy in northern Indiana but trended toward normal southward to the Ohio River. There were 4 days of severe weather with wind gust damage on May 17<sup>th</sup> and 18<sup>th</sup> and hail, wind, and tornado destruction the next two days. There was one confirmed tornado on May 19<sup>th</sup> and 3 more on May 20<sup>th</sup>. Farmers were finally able to make good planting progress during a sequence of dry days.

A weak cold front in northern Indiana drifted into central Indiana on May 15<sup>th</sup>, becoming stationary. The storm center linked to this front was far west in Minnesota so this was a dry day in Indiana. The state temperature opened the week at 7°F above normal. The storm center moved to Lake Michigan the next day. Warmer air was drawn north ahead of the low center. The stationary front converted into a warm front and relocated to just north of Indiana. The state became enjoined with a warm sector supported by a high pressure center in Georgia. The Indiana state temperature responded upward to 9°F above normal.

On May 17<sup>th</sup> the Lake Michigan storm center merged with another low center over Hudson Bay. This expanded the warm sector which now covered much of the eastern half of the country. The Georgia ridge had moved east into the Atlantic Ocean to strengthen the Bermuda High, spreading warmth from Canada to the Gulf of Mexico. The Indiana state temperature climbed to 11°F above normal with continued dry weather. The west edge of the warm sector began to collapse the next day, placing a cold front in Illinois. Indiana remained in the warm sector a bit longer with the state temperature peaking at 13°F above normal, the warmest day of the week. Scattered rainfall entered the southern half of the state and high winds caused damage in north central Indiana.

The cold front crossed the state on May 19<sup>th</sup>. Storms broke out across central and southern Indiana ahead of the front causing hail and wind damage. A confirmed tornado touched down in Crawford county with large hail nearby. Much cooler air reached Indiana from central Canada. The state temperature tumbled to 2°F above normal with rainfall across central and southern Indiana. The cold front stalled along the Ohio River the next day as high pressure traveled more east than south

across Canada. Three confirmed tornadoes struck west central and southeast Indiana. Most other wind and hail damage occurred in southeast Indiana that day. With the front completely through Indiana the state temperature settled to 1°F above normal. Rain fell statewide.

A new low center in Kansas moved north to Minnesota on May 21<sup>st</sup> with an occluded front. The stationary front on the Ohio River reversed direction as a warm front and crossed into Michigan. Its paired cold front immediately west of the warm front arrived in western Indiana. The rapid succession of air masses into warmer, then cooler air prevented much temperature change in Indiana that day. The state temperature dipped slightly to close the week right at normal. Rainfall became heavy statewide with multiple fronts in the vicinity.

Over the 7 days the Indiana state temperature averaged to 6°F above normal. Typically at this point in May daily maximum temperatures should vary from 71°F in far northern counties to 77°F in the far southwest corner of the state. Daily minimums should range between 49°F and 55°F north to south across the state. The warmest reported temperature among stations in the cooperative network was 93°F at Farmland 5nnw on May 18<sup>th</sup>. The coolest daily minimum among stations in this same network was 41°F at Laporte on May 20<sup>th</sup>.

Regionally rainfall totals for the week averaged about 1.7" across northern Indiana, 1.4" in central, and 1.1" in the south. These amounts equate to about double the normal in the northern third of Indiana, about 160% of normal in central areas, and 110% of normal in the south. On the weekly precipitation map more than 2.5" was totaled generally along a line between Clinton and Noble counties and between Jennings to Harrison and Clark counties in southern Indiana. In contrast less than 0.5" was found generally in a band from Henry to Gibson counties. Elsewhere between 0.5" and 2.5" was common.

The first half of the week was dry before rainfall amounts increased day by day. On May 18<sup>th</sup> rainfall was scattered across the southern half of the state and included central Indiana the next day. The heaviest single day amounts appeared statewide in the daily morning CoCoRaHS reports of May 20<sup>th</sup> and 21<sup>st</sup>. The observer in Salem collected 6.19" the morning of May 20<sup>th</sup> while near North Vernon 2.79" was measured. The next day the Charlestown volunteer tallied 3.78" while Wabash had 2.75" and near Albion 2.46" fell. Over the 7 days the Charlestown observer had captured 4.34", New Pekin had 3.81", Wabash 3.78", New Salem 3.72", and Marion 3.33".

Severe weather developed on 4 days. Starting May 17<sup>th</sup> in Madison county wind gusts blew a tree onto an apartment roof causing damage to gutters and outside fencing. There were no injuries.

Wind gusts caused damage in 4 northern Indiana counties on May 18<sup>th</sup>. A tree fell on a road in Kosciusko county and another tree on a house in Cass county. In neighboring Miami county multiple trees blocked roads after they fell. Lightning had struck some of these trees. High winds brought tree limbs down in Huntington county. An isolated report of one inch diameter hail was noted in Knox county.

On May 19<sup>th</sup> an EF-1 tornado was confirmed in Crawford county. The tornado damaged trees and some buildings with peak wind speeds at 90 mph. The tornado was on the ground for a short 0.2 mile and knocked down or split several trees. A barn was hit with 80 mph winds which blew out a door and damaged part of the roof. Parts of the roof had smashed several vehicle windows at an auto body shop 125 yards away. A trailer had roof damage and another roof was torn off an RV. A

pickup truck body was thrown 150 yards into a field. Another RV was pushed on its side. The auto body shop itself suffered roof damage. Three trees were broken outside the shop. Elsewhere in the county straight line winds blew a porch off a trailer home. A metal outbuilding was damaged.

Large hail were reported in 4 counties. Hail with a diameter of 1.25" was reported in Randolph county, sizes of 1.00" and 1.75" in Owens county, with 1.00" to 2.00" diameters measured in Monroe county. Hail with 1.25" and 1.75" diameters were noted in Harrison county. Meanwhile winds to 65 mph in Madison county pushed 2 trailers on their sides. A flipped semi-truck injured 2 people inside. In southeast Indiana wind gusts in Ripley and Switzerland counties took down more trees.

Not all natural damages on May 19<sup>th</sup> were attributed to tornadoes, wind, and hail. An emergency was declared in Washington county and in parts of Jefferson, Clark, and Scott counties due to flash flooding. Some buildings and vehicles were engulfed in 20 feet of water. Power outages resulted and damages were estimated in the millions of dollars.

Officials requested a voluntary evacuation of Washington county. Many roads in and out of the city of Salem were closed. There were many water rescues performed that evening. Two tankers and three semi-trucks crashed into a US highway bridge. To the north in Jackson county downtown Seymour streets were also flooded.

In Allen county flooding caused by torrential rainfall of 5" in an hour caused workers and children at a day care to become trapped. All were safely evacuated by fire truck.

Three confirmed tornadoes and multiple reports of wind and hail damage in southeast Indiana dominated May 20<sup>th</sup> severe weather news.

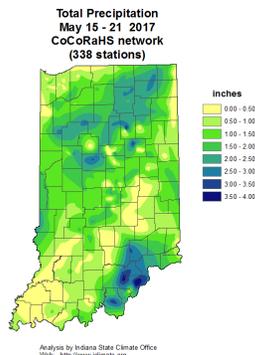
A confirmed EF-1 tornado touched down in Clinton county. This tornado traveled 0.1 mile and carried winds of 95 mph. It damaged a fire station in the town of Forest but caused no injuries. A pole barn was leveled and other structural damages were noted.

A second confirmed EF-0 tornado briefly touched down in Benton county, then crossed into White county. There a farm had minor damage, a small tree was uprooted, and small items were thrown around. Winds were estimated at 65 mph and the total path length at 2.0 miles. There were no injuries or deaths.

The third tornado hit late in the day near the Ohio River in Jefferson county. The path of this storm was a short 0.2 mile. Winds in this EF-1 tornado were estimated to 90 mph, uprooting and snapping trees along the way, and covering homes in trees. Siding was torn off houses then tossed several hundred feet. A camper was rolled several times and destroyed. Near the end of its run the tornado hit an abandoned farm house and damaged still more trees.

Straight line winds to 90 mph in the county damaged some local businesses. A bowling alley lost its roof and a nearby nursery suffered damage. There were power lines and tree limbs strewn throughout the county. There were many places where trees fell on to roads in Switzerland, Clark, and Jefferson counties. Power lines lie in roadways of Jefferson county where winds reached 61 mph. Downed trees were noted in Ripley county. Hail to 1.00" was reported in Crawford county and up to 1.25" in Clark county.

According to the May 22<sup>nd</sup> edition of the USDA Indiana Weather Crop Report, planting of corn and soybeans made good progress this week during the short break from rain early in the week. Warm temperatures and wind gusts helped dry out fields for planting and replanting of crops. Corn planting in Indiana was about 75% complete while soybeans were near half finished. Winds in storms caused some light damage in corn. Spray opportunities were shut down by high winds. Weather conditions to make hay were good and pastures were green and growing. Weeds were also growing and this was becoming a problem for Indiana farmers according to the report.



## May 22<sup>nd</sup> – 31<sup>st</sup>

The daily Indiana state temperature tracked within 5°F of normal during the final 10 days of May. Rain fell every day somewhere across the state and suppressed the big temperature swings usually seen this time of year. Despite the frequent rains the total amounts by region were also not far off of normal. Severe weather was reported on 4 of the 10 days with local flash flooding on May 24<sup>th</sup>, wind damage on May 26<sup>th</sup>, local hail on May 27<sup>th</sup>, and both wind and hail on May 28<sup>th</sup>. There were no tornadoes. Farmers made little replanting progress this week due to the constant threat of rainfall.

The 10 day interval began cool with the state temperature at 5°F below normal on May 22<sup>nd</sup>. Weak high pressure over Kentucky extended into Indiana but scattered showers covered the state. The next day a low pressure system moved into Wisconsin, positioning Indiana inside a small warm sector. The state temperature barely moved to 4°F below normal. In the upper atmosphere a trough began to dig south into Indiana, keeping the chances for precipitation high.

At ground level on May 24<sup>th</sup> the Wisconsin low split into two with one core centered over Indiana with a stationary front in northeast Indiana. The state temperature dipped a bit to 5°F below normal. The Indiana low developed an occluded front and intensified the next day. The low center moved little but rainfall increased and started moving in a circular pattern around the deep low. The state temperature hardly changed, warming to 3°F below normal.

The Indiana low escaped suddenly on May 26<sup>th</sup>, racing east to New England. A long trough stretched from Minnesota to Missouri. In the gap between these systems high pressure over Florida

squeezed north to Indiana, helping lift the state temperature to 2°F above normal. The next storm system in Oklahoma zipped along to Indiana and laid down a stationary front along the way, which was extended to Virginia. The Indiana temperature bumped up again to 4°F above normal.

The west portion of the stationary front drifted south on May 28<sup>th</sup> but the Indiana low center and the eastern section of the stationary front didn't budge, holding the temperature at 4°F above normal. The low center moved northeast the next day and the stationary front drifted south into Kentucky. A new cold front moved into Wisconsin. Indiana was between these fronts as the state temperature fell slightly to 3°F above normal.

The Wisconsin front traveled south to central Indiana on May 30<sup>th</sup>, slowing along the way. Cooler air was brought in from central Canada, dropping the Indiana temperature to 1°F below normal. The cold front stalled in central Indiana on May 31<sup>st</sup>.

Over the 10 day interval the Indiana state temperature averaged to 1°F below normal. Typically in late May the daily maximum temperature should range between 73°F and 80°F north to south across the state. The daily minimum normally varies from 52°F in far northern Indiana to 58°F in the far southwest corner of the state. The warmest daily maximum temperature recorded by the cooperative station network over the 10 days was 88°F at Boonville 1s and at Newburgh on May 27<sup>th</sup> and at Evansville Airport on May 31<sup>st</sup>. The coolest daily minimum among stations in the same network was 36°F at Columbus on May 24<sup>th</sup>.

Rain was recorded on all 10 days but covered the entire state only on May 25<sup>th</sup>. Just the northern half of Indiana received rain in CoCoRaHS reports on the morning of May 27<sup>th</sup> and central Indiana on May 30<sup>th</sup>. Lake effect precipitation was measured on May 23<sup>rd</sup> and rainfall was scattered on most remaining days. The 10 day total rainfall map showed a trend with light rain in western Indiana increasing to heavy amounts in eastern counties. Generally more than 2" fell east of an Elkhart to Madison city line. Less than an inch accumulated mostly in the west half of the state with amounts slightly higher in the southwest. Regionally about 1.7" was noted in northern and central Indiana with 1.50" in the south. These amounts equate to about 110% of normal in north and central counties with 90% of normal in southern Indiana.

The highest single day amounts were found in the morning reports of May 25<sup>th</sup>. Three CoCoRaHS volunteers in the Fort Wayne area captured 3.50", 3.30", and 3.24" in their respective gages. The Connersville observer measured 3.35" while in Hometown 3.29" was recorded. Over the full 10 days the Hometown observer summed 5.41" of rainfall while the three Fort Wayne gages tallied 5.04", 4.91", and 4.50". In Leo 4.65" was noted.

Severe weather developed on 4 days of the 10 day interval.

Heavy rain which fell in Fort Wayne and Allen county on May 24<sup>th</sup> caused flash flooding into the early morning hours of the next day. A travel advisory was issued by county officials for hazardous driving conditions. The torrential rainfall closed 36 city streets late on May 24<sup>th</sup>. Some residents had to be evacuated from their homes or escaped submerged cars. About 20 homes were evacuated by rescue crews.

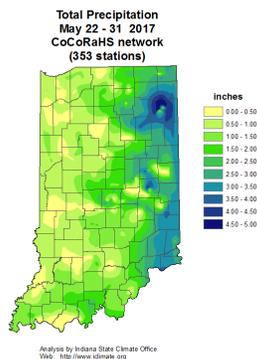
Wind and hail damage were reported in the northern half of Indiana on May 26<sup>th</sup>. In Lake county straight line winds in severe storms downed trees and power lines. Gusts to 54 mph were measured

at the Gary airport. In that city trees fell on a telephone pole and shattered it. High winds downed utility poles and buildings and vehicles were damaged. Multiple trees were ripped down in surrounding towns. Wind gusts toppled poles causing power loss. In Porter county power lines and power poles came down and tree limbs fell on a house. Trees were uprooted or snapped in Wabash county. In neighboring Huntington county a house lost its siding and a roof was torn off a barn. More trees fell there and in Kosciusko county. Wind gusts to 70 mph in Montgomery county brought down some rather large trees. In Hendricks county 75 mph winds took down poles and trees causing power outages. Very large 1.75" diameter hail shredded trees in Warren and Fountain counties.

Damage was localized to far southern Indiana on May 27<sup>th</sup>. Hail stones with diameter up to 1.75" fell in Crawford county while 1.00" hail was noted in Perry county.

On May 28<sup>th</sup> reports of 1.00" diameter hail came out of Wabash and Allen counties. Wind damage was noted in 3 east central counties. In Hancock county trees and power lines fell on to roads. A pole barn came down in Shelby county along with more trees and power lines. High winds were reported from Marion county but no estimates of damage were made.

The May 30<sup>th</sup> edition of the USDA Indiana Crop Weather Bulletin highlighted the agricultural impacts of the frequent and sometimes heavy rainfall on planting progress across the state. The bulletin noted that heavy rain periods greatly slowed down replanting efforts. Some crops were submerged within ponds in fields, eliminating opportunities for field work. Besides halting field work the standing water was causing crop emergence issues. The report stated that wheat was lodging due to the winds, rain, and field sinkholes. The few benefactors of the wet weather were pastures and hay. Livestock also seemed to thrive in the wet conditions.



## May 2017

| Region        | Temperature | Temperature |           |
|---------------|-------------|-------------|-----------|
|               |             | Normal      | Deviation |
| Northwest     | 58.3        | 60.8        | -2.5      |
| North Central | 58.4        | 60.3        | -1.9      |
| Northeast     | 58.2        | 59.8        | -1.6      |
| West Central  | 61.6        | 62.3        | -0.7      |
| Central       | 60.9        | 61.7        | -0.8      |
| East Central  | 60.4        | 60.8        | -0.4      |
| Southwest     | 65.5        | 64.6        | 1.0       |
| South Central | 64.6        | 63.9        | 0.7       |
| Southeast     | 63.0        | 63.0        | -0.1      |
| <b>State</b>  | 61.3        | 62.0        | -0.7      |

| Region        | Precipitation | Precipitation |           |                   |
|---------------|---------------|---------------|-----------|-------------------|
|               |               | Normal        | Deviation | Percent of Normal |
| Northwest     | 5.76          | 3.98          | 1.79      | 145               |
| North Central | 6.67          | 3.85          | 2.82      | 173               |
| Northeast     | 7.54          | 3.78          | 3.77      | 200               |
| West Central  | 7.07          | 4.38          | 2.69      | 162               |
| Central       | 8.02          | 4.40          | 3.63      | 182               |
| East Central  | 7.99          | 4.31          | 3.68      | 185               |
| Southwest     | 5.99          | 4.99          | 1.00      | 120               |
| South Central | 6.39          | 5.00          | 1.39      | 128               |
| Southeast     | 7.24          | 4.85          | 2.39      | 149               |
| <b>State</b>  | 6.94          | 4.40          | 2.54      | 158               |

## Spring (March - May)

| Region        | Temperature | Temperature |           |
|---------------|-------------|-------------|-----------|
|               |             | Normal      | Deviation |
| Northwest     | 50.4        | 49.6        | 0.8       |
| North Central | 50.1        | 49.0        | 1.1       |
| Northeast     | 49.8        | 48.5        | 1.3       |
| West Central  | 53.8        | 51.5        | 2.3       |
| Central       | 53.3        | 50.9        | 2.5       |
| East Central  | 52.7        | 49.9        | 2.7       |
| Southwest     | 57.5        | 54.7        | 2.8       |
| South Central | 57.2        | 54.1        | 3.1       |
| Southeast     | 55.8        | 53.1        | 2.7       |
| <b>State</b>  | 53.5        | 51.4        | 2.1       |

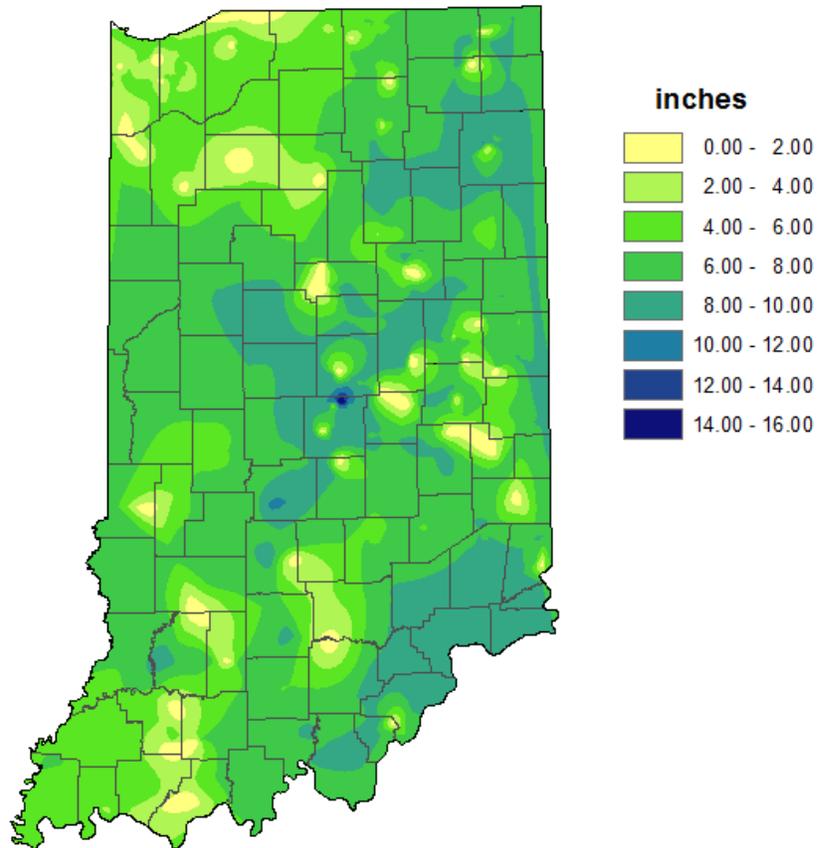
| Region        | Precipitation | Precipitation |           |                   |
|---------------|---------------|---------------|-----------|-------------------|
|               |               | Normal        | Deviation | Percent of Normal |
| Northwest     | 14.41         | 10.50         | 3.92      | 137               |
| North Central | 14.40         | 10.22         | 4.18      | 141               |
| Northeast     | 15.01         | 9.96          | 5.05      | 151               |
| West Central  | 16.18         | 11.61         | 4.57      | 139               |
| Central       | 17.35         | 11.59         | 5.76      | 150               |
| East Central  | 16.75         | 11.16         | 5.59      | 150               |
| Southwest     | 15.59         | 13.66         | 1.92      | 114               |
| South Central | 15.69         | 13.59         | 2.10      | 115               |
| Southeast     | 17.35         | 13.01         | 4.34      | 133               |
| <b>State</b>  | 15.86         | 11.74         | 4.12      | 135               |

## 2017 Annual so far (Jan - May)

| <b>Region</b> | <b>Temperature</b> | <b>Temperature</b> |                  |
|---------------|--------------------|--------------------|------------------|
|               |                    | <b>Normal</b>      | <b>Deviation</b> |
| Northwest     | 44.0               | 40.1               | 3.9              |
| North Central | 43.9               | 39.7               | 4.2              |
| Northeast     | 43.7               | 39.3               | 4.4              |
| West Central  | 47.1               | 42.1               | 5.1              |
| Central       | 47.0               | 41.7               | 5.3              |
| East Central  | 46.4               | 40.8               | 5.6              |
| Southwest     | 51.0               | 45.9               | 5.1              |
| South Central | 50.8               | 45.5               | 5.3              |
| Southeast     | 49.5               | 44.5               | 5.0              |
| <b>State</b>  | 47.1               | 42.3               | 4.9              |

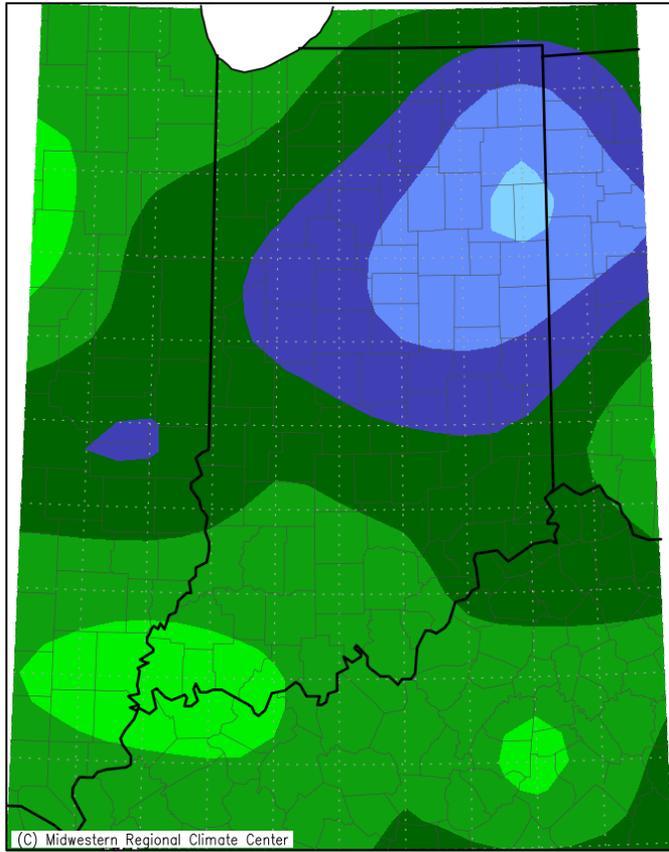
| <b>Region</b> | <b>Precipitation</b> | <b>Precipitation</b> |                  |                          |
|---------------|----------------------|----------------------|------------------|--------------------------|
|               |                      | <b>Normal</b>        | <b>Deviation</b> | <b>Percent of Normal</b> |
| Northwest     | 19.44                | 14.05                | 5.39             | 138                      |
| North Central | 19.96                | 14.07                | 5.90             | 142                      |
| Northeast     | 20.84                | 13.72                | 7.12             | 152                      |
| West Central  | 20.57                | 16.06                | 4.52             | 128                      |
| Central       | 22.48                | 16.20                | 6.28             | 139                      |
| East Central  | 22.20                | 15.60                | 6.59             | 142                      |
| Southwest     | 19.62                | 19.54                | 0.08             | 100                      |
| South Central | 20.51                | 19.61                | 0.90             | 105                      |
| Southeast     | 22.92                | 18.82                | 4.10             | 122                      |
| <b>State</b>  | 20.88                | 16.46                | 4.42             | 127                      |

**Total Precipitation  
May 2017  
CoCoRaHS network  
(370 stations)**



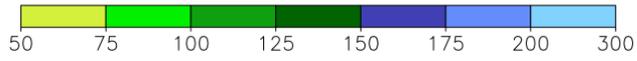
Analysis by Indiana State Climate Office  
Web: <http://www.iclimate.org>

Accumulated Precipitation: Percent of Mean  
May 1, 2017 to May 31, 2017



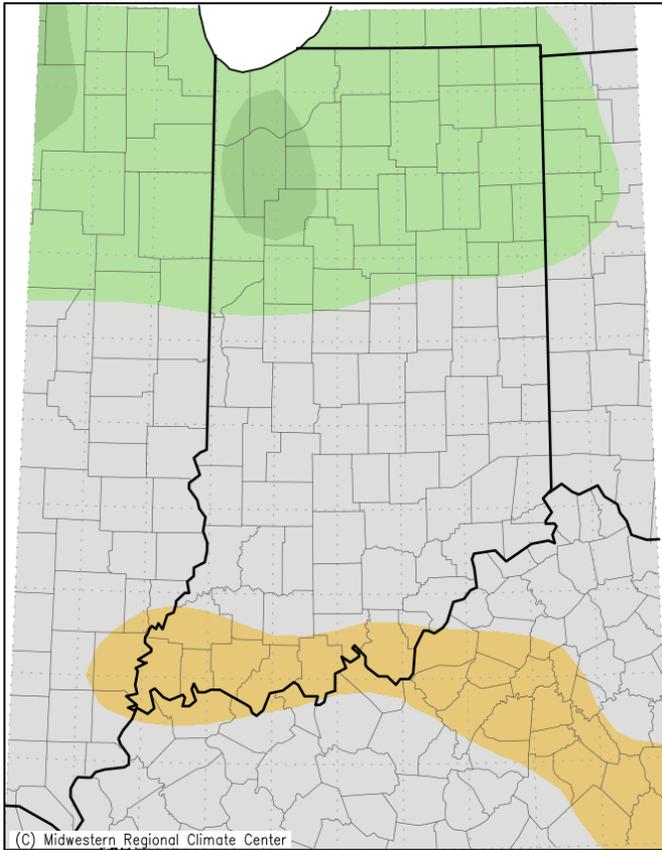
(C) Midwestern Regional Climate Center

Mean period is 1981–2010.

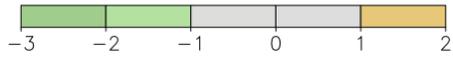


Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 6/9/2017 10:45:44 AM CDT

Average Temperature (°F): Departure from Mean  
May 1, 2017 to May 31, 2017



Mean period is 1981-2010.



Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 6/9/2017 10:46:39 AM CDT

## Drought Summary from the U.S. Drought Monitor

Below is a drought summary for the state of Indiana from the U.S. Drought Monitor. Areas in white are not experiencing any drought. Yellow areas are abnormally dry, but not considered a drought. Drought begins when the moisture levels become more severe, with beige, orange, red, and brown indicating increasing levels of drought (moderate, severe, extreme, and exceptional, respectively). The table below indicates what percentage of the state is drought free, and how much of the state is in drought by degree of severity (D1 - D4 category).

Indiana Statistics type: Categorical Percent Area

### Percent Area in U.S. Drought Monitor Categories

Show 25 entries

Search:

| Week       | None   | D0   | D1   | D2   | D3   | D4   |
|------------|--------|------|------|------|------|------|
| 2017-06-06 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017-05-30 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017-05-23 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017-05-16 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017-05-09 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2017-05-02 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

*May 2<sup>nd</sup> Drought Summary*



*May 9<sup>th</sup> Drought Summary*



*May 16<sup>th</sup> Drought Summary*



*May 23<sup>rd</sup> Drought Summary*



*May 30<sup>th</sup> Drought Summary*

