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## Indiana State Climate Office

### Monthly Weather Report



<http://www.iclimate.org>

**Oct 5, 2017**

## September 2017 Climate Summary

### Month Summary

September continued the recent trend of long cool and warm spells and below normal rainfall, but with fewer severe weather days. The main rainmakers this month were the remnants of two hurricanes. Only two minor severe weather days were noted. The tendency for autumn droughts was reaffirmed when moderate drought was introduced. Farmers coped with field dryness resulting in shattered soybeans and combine fires as the annual harvest began.

The September state average temperature of 67.5°F ties 1920 as the 36<sup>th</sup> warmest September on record. Last year September was warmer at 69.9°, the 6<sup>th</sup> warmest on record. Other Septembers since 2000 that were warmer include 2008 at 34<sup>th</sup> warmest, 2015 in the 22<sup>nd</sup> spot, 2007 as 20<sup>th</sup> warmest, and 2005 at 14<sup>th</sup> in the ranking. The warmest September on record was long ago in 1925 at 71.9°F. The day split was 14 days of below normal temperature, 15 days above normal, and 1 day at normal. There were 7 days when the daily state average temperature was 10°F or more above normal and 3 days 10°F or more below normal.

The month began with 3 cool days to extend the last 9 days of August into a 12 day cool spell. After one warm day, the cool spell resumed for another 10 days. A normal day led into a 14 day warm spell before the month ended with 2 cool days. The highest temperature of the month was 99°F at Terre Haute ISU on September 5<sup>th</sup>. The coolest was 38°F on September 11<sup>th</sup> at Plymouth.

The September state precipitation averaged to 1.95", which is 1.14" below normal and ranks the month as the 29<sup>th</sup> driest September on record. Only two Septembers since 2000 were drier on a statewide basis: 2010 with 1.35" as the 12<sup>th</sup> driest overall and 2004 at 0.72", good for 2<sup>nd</sup> driest. The driest September on record came in 1897 when the state average was just 0.56". The heaviest single day precipitation among cooperative network stations in September 2017 was 2.82" on September 20<sup>th</sup> at Cannelton. The highest in the CoCoRaHS network was 4.09" on September 2<sup>nd</sup> at Jeffersonville 0.8nw. The largest month total precipitation in the cooperative network was 6.57" at Cannelton. In the CoCoRaHS network the largest total was 6.06" at Jeffersonville 0.8nw. Widespread precipitation fell on about 9 days this month.

Regionally September 2017 precipitation summed to about 55% of normal across northern Indiana, near 50% in central, and 90% of normal across the south. Normal September precipitation ranges from 2.8" in east central Indiana to 3.3" in the north central part of the state.

## September 1<sup>st</sup> – 9<sup>th</sup>

A 9 day cool spell at the end of August persisted another 9 days into September. The state average temperature continued below normal on 8 of 9 days to start this month. Rainfall was generally below normal except in far southeast Indiana where the remnants of hurricane Harvey dumped tropical moisture. Only 2 fronts passed through the state in this 9 day interval. There were 2 isolated wind gust reports on Labor Day, one causing damage. There was no change in abnormally dry soil coverage area across Indiana since August according to the US Drought Monitor. The USDA Indiana Crop Weather bulletin stated that the extended cool weather slowed the maturity rate of Indiana field crops.

September 1<sup>st</sup> was cold with the state average temperature 10°F below normal. A stationary front had drifted south through Indiana into Kentucky early that morning. This front merged with the remnants of hurricane Harvey which had traveled north from Louisiana, spreading rain into Indiana counties bordering the Ohio River. The Harvey remnants moved on to the Carolinas the next day but left behind an occluded low center in Kentucky which continued to produce rain in southeast Indiana. The state temperature nudged up a degree to 9°F below normal.

The remnants of Harvey moved north and no longer impacted Indiana on September 3<sup>rd</sup>. The occluded low center was gone with only a minor trough over Indiana. Under clearing skies the state temperature rebounded to 3°F below normal. After 12 cool days the state temperature finally broke through to 2°F above normal on Labor Day, the warmest and only day above normal in this 9 day interval. A ridge to the south of Indiana had slid east and tapped into warmer air.

A cold front marched from Wisconsin to Kentucky on September 5<sup>th</sup>. A strong Montana ridge transported much cooler air to Indiana, lowering the state temperature to 5°F below normal. The ridge moved to Nebraska by the next morning, forcing the cold front east to the Atlantic states. Colder air continued to flow from Canada to Indiana, lowering the state temperature to 13°F below normal, the coldest day of the 9 day interval.

The core of the ridge relocated to Arkansas on September 7<sup>th</sup> and sprawled over the east half of the country. The cold air influx into Indiana gradually shut down. The state temperature edged upward to 12°F below normal. The ridge began to collapse as it traveled east to the Appalachian Mountains the next day. A southerly wind backflow helped lift the Indiana state temperature to 8°F below normal.

High pressure out of central Canada on September 9<sup>th</sup> replaced the former ridge over Indiana. Skies were sunny with a light northerly wind as the state temperature held steady at 8°F below normal.

Over the 9 day interval the Indiana state temperature averaged to 7°F below normal. Typically at the beginning of September the daily maximum temperature would range between 78°F in far northern Indiana to 85°F in the southwest corner of the state. Daily minimums normally vary between 58°F and 61°F north to south across the state. The warmest temperature of the 9 days in the cooperative station network was 99°F at Terre Haute ISU on September 5<sup>th</sup>. The coolest temperature among stations in that same network was 41°F at several locations on several dates.

Rainfall totals for the 9 days were in the 3” to 5” range in far southeast Indiana, including Harrison, Floyd, Clark, Jefferson, Scott, Switzerland, and Ohio counties. This region was impacted by the

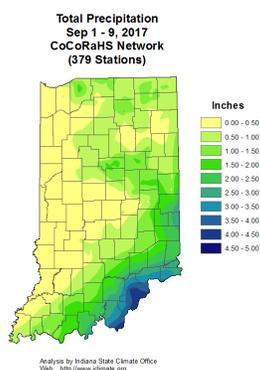
remnants of hurricane Harvey. A 1” to 3” band was located north of this heavy rain area and along the Ohio border south of Wayne county, and in parts of northeast Indiana. It was mostly drier in the west half of the state where less than a half inch of rain was common. Regionally about 0.5” was received across northern Indiana, 0.7” in central, and 1.4” in the south. These amounts equate to about 50% of normal in the north, 80% in central counties, and 170% of normal in southern Indiana.

Rain fell somewhere in Indiana on all 9 days but was measured statewide only on September 5<sup>th</sup>. Rain was mostly limited to the Lake Michigan region on September 6<sup>th</sup>, 8<sup>th</sup>, and 9<sup>th</sup>. Southeast Indiana recorded rainfall on September 1<sup>st</sup> and 2<sup>nd</sup> with central Indiana favored on September 7<sup>th</sup>. The heaviest rainfall of the week was noted by CoCoRaHS network stations in morning reports on September 2<sup>nd</sup>. The Henryville observer had 4.20” and in Jeffersonville 4.09” was observed. In Charlestown 3.93” was measured while near New Albany 3.68” fell. The Hanover gage caught 3.28” that morning. Totals over the 9 days included two Jeffersonville reports of 4.38” and 4.32”. Henryville summed to 4.37”, Charlestown 4.28”, and Elizabeth 3.64”.

On September 4<sup>th</sup> a wind gust of 60 mph was reported in Randolph county in east central Indiana. To the west in Howard county trees fell across county roads in wind gusts.

The US Drought Monitor edition of September 5<sup>th</sup> was unchanged from the week prior. Abnormally dry soils covered 13% of Indiana land area and included several counties stretching between Warren and Monroe counties. Elkhart and Lagrange counties formed a second smaller area of abnormally dry soils.

The September 11<sup>th</sup> edition of the USDA Crop Weather bulletin for Indiana stated that the cooler and drier than normal conditions in recent days has slowed the maturity of the corn and soybean crops. Both crops are about 25% mature across the state. Irrigation was still running in the drier western soils of the state. Corn and soybean fields have been drying down in response to the mostly limited rainfall of the past 2 weeks. The report noted that most pastures are drying out but livestock are still in good condition due to the cooler temperatures.



## September 10<sup>th</sup> – 16<sup>th</sup>

With the exception of Labor Day which was warmer than normal, the cool spell that began August 23<sup>rd</sup> finally ended on September 14<sup>th</sup>. Indiana state temperatures this week warmed day by day and

ended the week 16°F higher than where they began. Rainfall was generally below normal statewide with no fronts passing through Indiana. What did pass through the state were the remnants of hurricane Irma which contributed most of the precipitation this week. The Indiana coverage by abnormally dry soils doubled according to the September 12<sup>th</sup> edition of the US Drought Monitor. The change to warm and drier weather helped advance field crop dry down and maturity according to the USDA Indiana Crop Weather bulletin for September 18<sup>th</sup>. Western Indiana crops needed rain.

A huge ridge was sprawled over the east half of the country on September 10<sup>th</sup>. The core of the ridge was over Lake Huron, keeping the Indiana state temperature cool at 9°F below normal. The ridge moved to Lake Ontario the next day but the state temperature didn't budge. The ridge weakened as hurricane Irma traveled into northern Florida.

On September 12<sup>th</sup> Irma itself weakened and skidded to northern Alabama, spreading showers as far as southern Indiana. The old ridge had squeezed between Michigan and New York as Irma approached from the south. The Indiana state temperature rose a tad to 7°F below normal as the remnants of Irma began to pull warmth and moisture toward the state. The remnants relocated to the Missouri boot heel the next day, close enough to spread rain across nearly all of Indiana. The state temperature nudged upward to 6°F below normal.

The remnants of Irma raced to New York on September 14<sup>th</sup>, ending its impact on Indiana. High pressure pushed east from Oklahoma to Indiana, warming the state temperature to normal. Rain gradually ended over all but far southern Indiana. The high center drifted east to Pennsylvania and strengthened the next day, clearing Indiana skies and starting a backflow warmup. The state temperature lifted to 4°F above normal.

On September 16<sup>th</sup> the ridge continued sliding east to the Atlantic states. The warmup intensified over Indiana, increasing the state temperature to 7°F above normal. Once again the eastern ridge dominated the east half of the country as the week came to a close.

For the week the Indiana state temperature averaged to 3°F below normal. Usually at this point in September the daily maximum temperature would vary between 75°F and 82°F north to south across the state. Daily minimums should range from 55°F in far northern counties to 58°F in the southwest corner of the state. The warmest temperature among stations in the cooperative network was 92°F at Vincennes 5ne on September 16<sup>th</sup>. The coolest temperature among stations in this same network was 38°F at Wanatah 2wnw on September 10<sup>th</sup> and at Plymouth on September 11<sup>th</sup>.

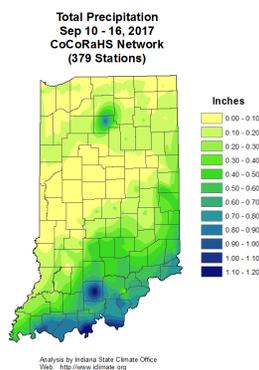
On the weekly rainfall map more than 1" of rain fell generally in the southern tier of counties except Posey but included Orange county. More than 0.5" fell generally south of a Vincennes to Richmond line and in Marshall and Fulton counties. Rainfall totals were very light elsewhere. Regionally about 0.1" of rain accumulated in northern Indiana, 0.2" in central areas, and an average of 0.5" across the south. These amounts equate to about 10% of normal in northern Indiana, 20% in central, and 70% of normal across the south.

Rain was recorded mostly in the southern tier of counties in morning reports of September 12<sup>th</sup> and 15<sup>th</sup>. Rainfall was noted statewide or nearly statewide on September 13<sup>th</sup> and 14<sup>th</sup>. The heaviest single day amounts included 0.80" and 0.76" in two reports from Newburgh on September 13<sup>th</sup> and 1.00" in Oolitic, 0.90" at Rochester, and 0.83" in Paoli the next day. Over the 7 days the three

CoCoRaHS observers in Newburgh topped out at 1.04”, 0.98”, and 0.89”. The gage at Floyds Knobs totaled to 0.95” while Rochester tallied 0.92”.

The US Drought Monitor edition of September 12<sup>th</sup> expanded the abnormally dry D0 category to 26% of total Indiana land area. In far northern Indiana the abnormally dry region included Lake, Porter, the northern halves of Newton and Jasper counties, and the Elkhart and Lagrange county areas as before. The west central D0 region was enlarged and generally enclosed by a Boswell to Sheridan to Franklin to Princeton line. Area west of this boundary was included in the enhanced D0 region.

According to the USDA Indiana Crop Weather bulletin edition of September 19<sup>th</sup> the warm and dry weather had helped dry down the corn and soybean field crops. Western Indiana had become dry and even in far southern Indiana where Irma rain fell, amounts were small. About 25% of corn in northern Indiana was considered mature, and 50% in northern and central Indiana. Near 45% of soybeans were dropping leaves the report said. Corn harvest had begun but most cobs were still too wet. Soybeans planted later in the season needed rain. Livestock were rated in excellent condition but pasture growth had slowed due to the rather dry weather recently.



## September 17<sup>th</sup> – 23<sup>rd</sup>

The temperature flip in mid-month from persistent September cold to warmer than normal carried through all 7 days this week. Temperatures ended the week unseasonably warm. Daily city temperature records were broken in Indianapolis and Fort Wayne. Rain totals were heavy in northern Indiana when the week’s only front stalled there for 3 days. An isolated report of hail in Miami county was received on September 22<sup>nd</sup>. The US Drought Monitor inserted a moderate drought area in west central Indiana. The USDA Indiana Crop Weather report noted that crop dry down had accelerated and that irrigation of pastures was underway. The condition of livestock had declined in dry regions.

On September 17<sup>th</sup> Indiana was located within a warm air mass sector. The warm front extended east from a low center over Lake Superior while its cold front was traveling through Wisconsin and Illinois toward Indiana. An Appalachian ridge was porting warm Gulf coast air within the warm sector to Indiana. The state temperature opened the week at 9°F above normal. The cold front

advanced into central Indiana the next day where it halted as a stationary front. The state temperature edged lower to 8°F above normal.

Hurricane Jose sat off the Delaware coast on September 19<sup>th</sup>, causing an atmospheric traffic jam. This storm effectively blocked high pressure from leaving the southeast states. That ridge in turn stalled movement of a stationary front which could only drift slightly into northern Indiana. The state temperature was unchanged. The next day the state temperature lifted to 11°F above normal. A cold front raced from the Rocky Mountains eastward to Iowa, collapsing the warm sector and speeding the warm up over Indiana.

The southeast ridge remained strong and slowed the advancing cold front in Illinois on September 21<sup>st</sup> while wedging the warm sector north to Hudson Bay. Warming accelerated over Indiana. The state temperature soared to 16°F above normal. The southeast ridge dominated the eastern half of the country the next day, forcing the Illinois stationary front into retreat to the Canadian border. The Indiana state temperature increased a tad more to 18°F above normal.

Weather systems moved little on September 23<sup>rd</sup>. Unusual warmth continued to flow into Indiana with mostly sunny skies, closing the week with the state temperature at 19°F above normal.

For the week the state temperature averaged to 13°F above normal. Typically daily maximum temperatures should range from 72°F in far northern counties to 80°F in the southwest corner of the state. Daily minimums normally vary between 52°F and 55°F north to south across the state. The warmest temperature of the week among cooperative network stations was 97°F at Terre Haute ISU and Vincennes 5ne on September 23<sup>rd</sup>. The coolest temperature among stations in this same network was 39°F at Columbia City on September 17<sup>th</sup>.

On the weekly rainfall map more than 1" fell generally north of a Perrysville to Frankfort to Logansport to Decatur line. The heaviest amounts exceeded 2.5" in parts of Warren, Noble, Steuben, and DeKalb counties. Less than 0.5" was found generally east of a Richmond to Rockville to Madison line. Regionally about 1.2" was noted across northern Indiana and 0.7" in central and southern sections. These amounts equate to about 170% of normal in the north with near normal totals generally in central and southern Indiana.

Rainfall was observed statewide in CoCoRaHS morning reports of September 19<sup>th</sup> and nearly statewide the next day. Northern and central Indiana recorded precipitation on September 18<sup>th</sup> while just a few places had water in their rain gages on September 21<sup>st</sup> and 23<sup>rd</sup>. The heaviest single day amounts were noted on September 19<sup>th</sup> when Brook measured 2.37" and 2.21" was collected south of Indianapolis. In Lake county the St John observer had 2.13" while in nearby Schererville 2.06" was caught in the rain gage. The Nappanee volunteer captured 2.10" the next morning. For the week 3.01" was summed near Attica. In the Angola vicinity 2.95" accumulated while the Syracuse gage tallied 2.70", the south side of Indianapolis had 2.64", and the Schererville total came to 2.27".

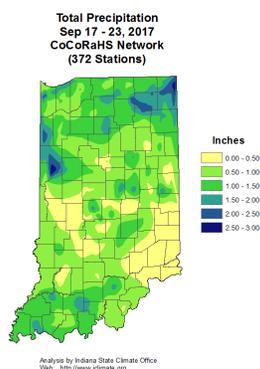
Over the week a single report of 1.0" diameter hail was taken in southern Miami county.

The US Drought Monitor edition of September 19<sup>th</sup> introduced moderate drought into Indiana. This was the first appearance of the D1 category in Indiana since 20 Dec 2016. This new D1 area was carved from the existing abnormally dry D0 area of west central Indiana and generally included the

counties of Vermillion, Parke, south Fountain, south Montgomery, Putnam, most of Hendricks and Morgan, north Monroe, most of Owen, and the north tip of Clay. In line segments the equivalent would be approximately areas west of a Boswell to Sheridan to New Harmony line.

There was a slight reduction of the abnormally dry D0 area in west central and central Indiana that surrounds the new D1 area. The abnormally dry D0 region in northern Indiana was expanded to all counties bordering Michigan and included parts of the Kankakee valley. That region was revised to extend generally north of a Morocco to Angola line. The overall net change had 8% of Indiana area rated in moderate drought, 25% as abnormally dry, and the remaining 66% in normal soil moisture status.

According to the September 25<sup>th</sup> edition of the USDA Indiana Crop Weather report the rainfall received was not enough to offset the impact of the unusually warm temperatures going into harvest. Corn was rated at 55% mature and 65% of soybeans were dropping leaves. The report noted that dry down was proceeding rapidly. Some soybeans and mint were being irrigated in dry areas. Weeds were still a big problem in southern Indiana while pastures were declining in the dry conditions. Hay was being fed to livestock in spots with poor pastures.



## September 24<sup>th</sup> – 30<sup>th</sup>

The persistent warm up last week was countered by a continuous cool down this final week of September. From start to end the daily state average temperature plummeted 21°F, from much above normal to a few degrees below normal, although just 2 cold fronts passed through Indiana this week. Rainfall was nearly absent with only a few light showers in northwest and north central Indiana on 3 days. The September 26<sup>th</sup> edition of the US Drought Monitor showed expansion on the fringes of the abnormally dry west central region. The USDA Indiana Crop Weather bulletin blamed the hot weather for the acceleration of crop field maturity and dry down rate, causing problems for soybean harvest. The condition of dry pastures deteriorated rapidly.

A dome of high pressure had spread across the east half of the country on September 24<sup>th</sup>. The Indiana state average temperature was extremely warm at 18°F above normal. The ridge crawled east to the Appalachian Mountains the next day, allowing a western cold front to reach Wisconsin

and Iowa. The Indiana state temperature slipped a bit to 14°F above normal but the state was still well inside the eastern warm air sector.

The ridge collapsed slightly on September 26<sup>th</sup> while the western cold front barely moved. Weather systems were being held up by hurricane Maria which had strengthened off the North Carolina coast. The Indiana state temperature didn't change either, holding at 14°F above normal. But the next day the ridge fully collapsed, allowing the west cold front to pass through Indiana ahead of a cold air mass plunging out of western Canada. The pleasant cool air replaced the Indiana heat of the past week as the state temperature dipped to 9°F above normal.

The cold front surged east to the Atlantic coast on September 28<sup>th</sup> to meet up with hurricane Maria off the New Jersey coast. The Canadian air mass took control of the Great Lakes region. Cooler air flowed to Indiana and hurried the state temperature drop to 1°F above normal. Another pulse of cool air advanced from Manitoba almost to Indiana the next day. The state temperature fell again to 1°F below normal.

On September 30<sup>th</sup> this second cold front easily passed through Indiana and into the southern states. High pressure settled over the Great Lakes and reinforced the cool air already over Indiana, dropping the state temperature a few more degrees to 3°F below normal to wrap up the week and month.

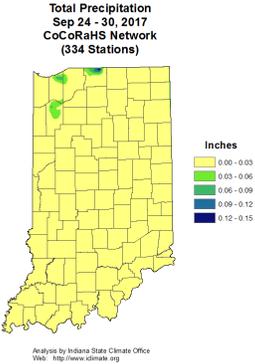
Over the 7 days the state temperature averaged to 7°F above normal. Usually at the end of September the daily maximum temperature should vary between 69°F and 77°F north to south across the state. Daily minimums normally range from 49°F in far northern Indiana to 52°F in the southwest corner of the state. The warmest temperature of the week among cooperative network stations was 96°F at Terre Haute ISU on September 27<sup>th</sup>. The coolest temperature among stations in this same network was 40°F at Lowell on September 30<sup>th</sup>.

Rainfall was sparse statewide this week. Very light showers fell in northwest Indiana according to CoCoRaHS reports on the morning of September 27<sup>th</sup>. Rainfall was even spottier the next day in north central counties. In morning reports of September 29<sup>th</sup> light rain was noted in South Bend and in isolated spots of northeast Indiana. Regionally the tiny week totals equate to nearly 0% of normal in northern, central, and southern Indiana. The heaviest single day amount was 0.12" near Granger on September 29<sup>th</sup>. The total there for the week was 0.15". All other station reports summed under 0.10" for the 7 days.

According to the US Drought Monitor edition of September 26<sup>th</sup> there was a slight expansion of the abnormally dry D0 region in west central and central Indiana this week. The expanded D0 coverage added nearly all of Fountain county, southern Tippecanoe, most of Clinton, western Tipton, all of Hamilton, most of Johnson, a piece of Bartholomew, most of Brown, northwest Lawrence, and almost all of Martin county. Total coverage by the D0 category rose from 26% to 30% while D1 remained at 8%. No soil moisture impact was declared in the remaining 62% of Indiana land area.

The hot weather caused new concerns to Indiana agriculture this week according to the October 2<sup>nd</sup> edition of the USDA Indiana Crop Weather bulletin. The heat helped advance the maturity of crops but rainfall was needed for soybean harvest and for planting of winter wheat. The dryness is causing shattering of soybeans during harvest and some combine fires have been reported. Crops continued to dry down quickly. Corn was about 70% mature with 20% harvested. About 80% of

soybeans were dropping leaves with near 25% harvested. Pastures were deteriorating due to the dry weather and were becoming overrun by weeds.



## September 2017

| Region        | Temperature | Temperature |           |
|---------------|-------------|-------------|-----------|
|               |             | Normal      | Deviation |
| Northwest     | 66.6        | 64.6        | 2.0       |
| North Central | 66.0        | 63.9        | 2.0       |
| Northeast     | 65.7        | 63.5        | 2.2       |
| West Central  | 68.1        | 65.9        | 2.3       |
| Central       | 67.3        | 65.3        | 2.1       |
| East Central  | 66.5        | 64.5        | 2.1       |
| Southwest     | 69.8        | 68.2        | 1.6       |
| South Central | 68.8        | 67.5        | 1.3       |
| Southeast     | 67.9        | 66.9        | 1.0       |
| <b>State</b>  | 67.5        | 65.7        | 1.9       |

| Region        | Precipitation | Precipitation |           |                   |
|---------------|---------------|---------------|-----------|-------------------|
|               |               | Normal        | Deviation | Percent of Normal |
| Northwest     | 1.52          | 3.21          | -1.70     | 47                |
| North Central | 1.90          | 3.30          | -1.40     | 58                |
| Northeast     | 2.11          | 3.19          | -1.08     | 66                |
| West Central  | 1.03          | 3.03          | -2.00     | 34                |
| Central       | 1.41          | 2.99          | -1.57     | 47                |
| East Central  | 1.88          | 2.79          | -0.91     | 67                |
| Southwest     | 2.14          | 3.13          | -0.99     | 68                |
| South Central | 3.03          | 3.11          | -0.08     | 98                |
| Southeast     | 3.24          | 2.97          | 0.27      | 109               |
| <b>State</b>  | 1.95          | 3.09          | -1.14     | 63                |

## Autumn so far (same as September)

| Region        | Temperature | Temperature |           |
|---------------|-------------|-------------|-----------|
|               |             | Normal      | Deviation |
| Northwest     | 66.6        | 64.6        | 2.0       |
| North Central | 66.0        | 63.9        | 2.0       |
| Northeast     | 65.7        | 63.5        | 2.2       |
| West Central  | 68.1        | 65.9        | 2.3       |
| Central       | 67.3        | 65.3        | 2.1       |
| East Central  | 66.5        | 64.5        | 2.1       |
| Southwest     | 69.8        | 68.2        | 1.6       |
| South Central | 68.8        | 67.5        | 1.3       |
| Southeast     | 67.9        | 66.9        | 1.0       |
| <b>State</b>  | 67.5        | 65.7        | 1.9       |

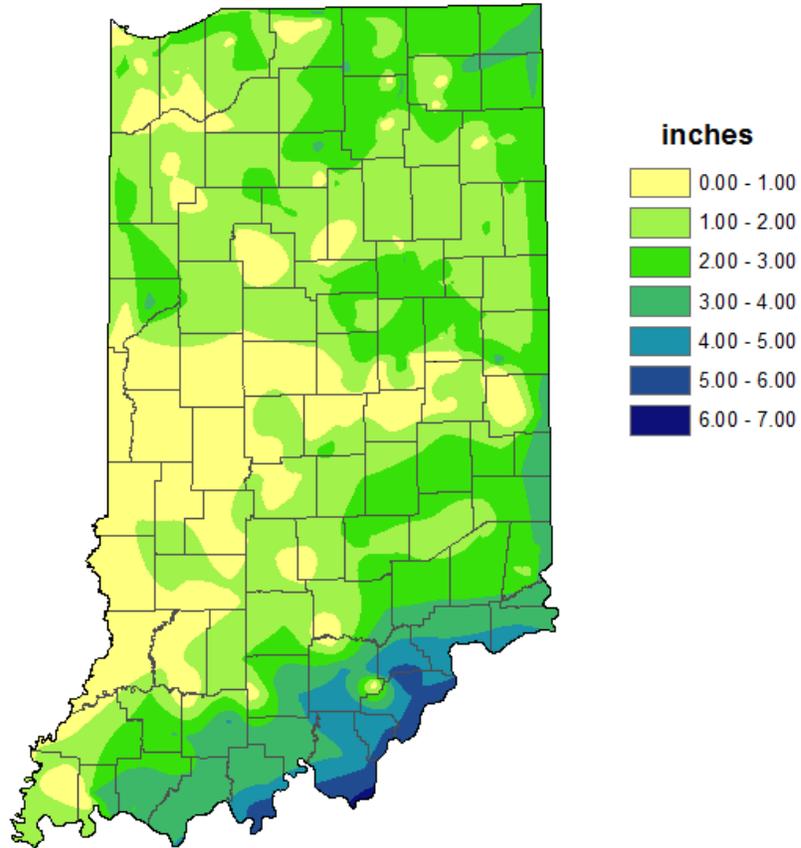
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| Central       | 1.41          | 2.99          | -1.57     | 47                |
| East Central  | 1.88          | 2.79          | -0.91     | 67                |
| Southwest     | 2.14          | 3.13          | -0.99     | 68                |
| South Central | 3.03          | 3.11          | -0.08     | 98                |
| Southeast     | 3.24          | 2.97          | 0.27      | 109               |
| <b>State</b>  | 1.95          | 3.09          | -1.14     | 63                |

## 2017 Annual so far (Jan - Sep)

| <b>Region</b> | <b>Temperature</b> | <b>Temperature</b> |                  |
|---------------|--------------------|--------------------|------------------|
|               |                    | <b>Normal</b>      | <b>Deviation</b> |
| Northwest     | 55.5               | 53.5               | 2.1              |
| North Central | 55.2               | 53.0               | 2.2              |
| Northeast     | 54.9               | 52.6               | 2.4              |
| West Central  | 57.9               | 55.1               | 2.8              |
| Central       | 57.5               | 54.6               | 2.9              |
| East Central  | 57.0               | 53.8               | 3.2              |
| Southwest     | 61.0               | 58.3               | 2.8              |
| South Central | 60.6               | 57.7               | 2.9              |
| Southeast     | 59.5               | 56.8               | 2.7              |
| <b>State</b>  | 57.8               | 55.1               | 2.7              |

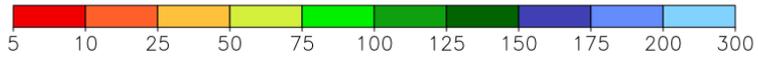
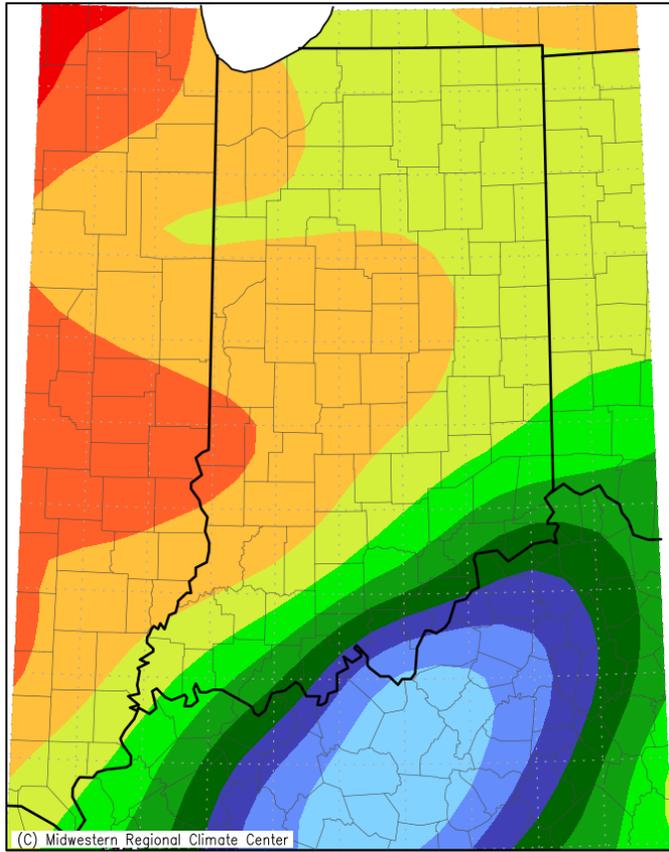
| <b>Region</b> | <b>Precipitation</b> | <b>Precipitation</b> |                  |                          |
|---------------|----------------------|----------------------|------------------|--------------------------|
|               |                      | <b>Normal</b>        | <b>Deviation</b> | <b>Percent of Normal</b> |
| Northwest     | 34.68                | 29.28                | 5.40             | 118                      |
| North Central | 34.47                | 29.30                | 5.17             | 118                      |
| Northeast     | 35.04                | 28.34                | 6.70             | 124                      |
| West Central  | 34.04                | 31.77                | 2.28             | 107                      |
| Central       | 38.33                | 31.30                | 7.04             | 122                      |
| East Central  | 37.44                | 30.27                | 7.17             | 124                      |
| Southwest     | 32.17                | 34.71                | -2.54            | 93                       |
| South Central | 35.91                | 35.04                | 0.87             | 102                      |
| Southeast     | 39.22                | 34.02                | 5.20             | 115                      |
| <b>State</b>  | 35.57                | 31.63                | 3.94             | 112                      |

**Total Precipitation  
September 2017  
CoCoRaHS network  
(394 stations)**



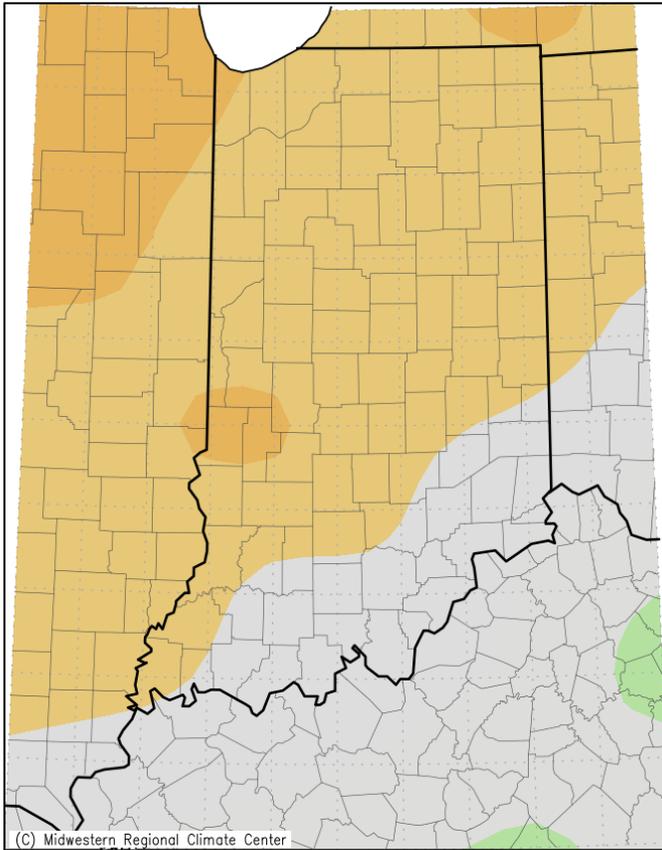
Analysis by Indiana State Climate Office  
Web: <http://www.iclimate.org>

Accumulated Precipitation: Percent of Mean  
September 1, 2017 to September 30, 2017



Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 10/4/2017 3:55:57 PM CDT

Average Temperature (°F): Departure from Mean  
September 1, 2017 to September 30, 2017



Midwestern Regional Climate Center  
cli-MATE: MRCC Application Tools Environment  
Generated at: 10/4/2017 3:57:01 PM 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).

Area: 
 Statistics type: 
 USDM  7-c

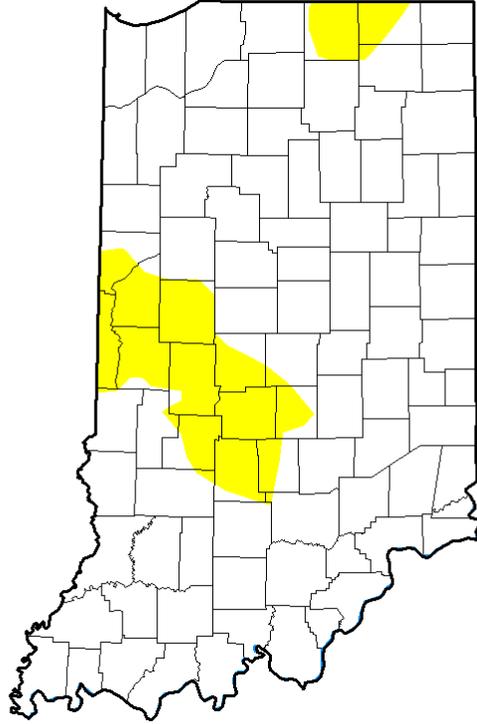
### Percent Area in U.S. Drought Monitor Categories

Show  entries

Search:

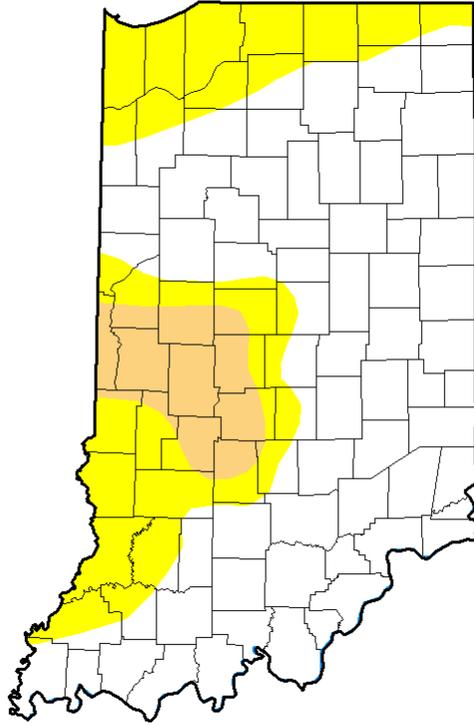
| Wk         | None  | D0    | D1   | D2   | D3   | D4   | DSCI |
|------------|-------|-------|------|------|------|------|------|
| 20-09-26   | 61.95 | 29.59 | 8.46 | 0.00 | 0.00 | 0.00 | 47   |
| 2017-09-19 | 66.26 | 25.30 | 8.43 | 0.00 | 0.00 | 0.00 | 42   |
| 2017-09-12 | 74.21 | 25.79 | 0.00 | 0.00 | 0.00 | 0.00 | 26   |
| 2017-09-05 | 87.34 | 12.66 | 0.00 | 0.00 | 0.00 | 0.00 | 13   |

*Sep 5<sup>th</sup> Drought Summary*





*Sep 19<sup>th</sup> Drought Summary*



*Sep 26<sup>th</sup> Drought Summary*

