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Indiana State Climate Office
Monthly Weather Report
Oct 7, 2008
http://www.iclimate.org

September 2008 Climate Summary

Summary

All of Indiana was warmer than usual during the first month of fall. The September 2008 statewide average temperature is 67.6°F, which is nearly 2°F above normal. High temperatures were rarely more than 5°F below normal over September's 30 days. Usually they were right where they were expected to be, in the low- to mid-70s. A few spurts into the 80's raised the average monthly high.

The precipitation trend for Indiana in September is not as easily stated as temperature was. Based on statistics the state was wetter than usual, receiving an average of 3.88 inches or 126% of the normal. However, weather systems in September flowed to the northeast and continually clipped the counties in the west central and northern parts of the state. These areas were extremely wet. The northwestern climate division received 8.38 inches of rain, 5.17 inches above normal (261%). North central counties received, on average, 6.34 inches which is 192% of the normal. Northeastern counties received approximately 4.94 inches, or 1.75 inches more than normal. West central was closer to the normal and experienced 121% of their normal. While those four areas were wet, the other five divisions were dry. There was a distinct line and storm path resulting in this anomaly. Southeastern counties received only 58% of their normal, seeing only 1.72 inches. The lack of rain in the central and southern divisions sparked a minor drought in the eastern and southern counties.

The emergence of neutral ENSO conditions and the transition towards a possible El Niño could mean that October may be abnormally warm and wet, based on past climatic data.

September 1st – 7th

Labor Day (September 1st) was absolutely beautiful across the entire state. There was no rain, the region was mostly free of clouds, and temperatures were above normal. High temperatures were generally close to 90°F. Perhaps that is a bit warmer than some people would have wanted for picnics and other outdoor activities, but it beats rain doesn't it? The mostly clear and hot conditions would continue on the 2nd, with highs again in the upper-80's. Unfortunately the rest of the week would see a complete reversal. Hurricane Gustav struck the Gulf Coast on Labor Day and the remnants hooked up with a synoptic low pressure system over the Mid-West on the 3rd. While the day began warmer than usual, as the front and the remnants of Gustav entered temperatures dipped. High temperatures struggled to breach the mid-70's during this moist period. Showers began late on the 3rd but were light and sparse. The heavier rains would come

on the 4th and 5th. The heaviest portions of the combined system were focused in the northwestern counties. This disturbance exited the state on the 6th, leaving behind a few showers in the east. Rainfall totals from the 3rd-6th reached as high as 3 inches in Lake and Porter counties. Most of the state, however, only accumulated ½ inch during this event. Temperatures rose a bit on the 6th and 7th but struggled to hit 80°F. Some areas remained 10°F below normal. The rain didn't stop either. After the low pressure system/Gustav left, a stationary front brought light rain and isolated thunderstorms across the northern half of Indiana. Accumulations were minimal once again as the systems were sporadic and short-lived.

September 8th – 15th

Throughout the morning and afternoon on the 8th a cold front entered the stat from the northwest. High temperatures reached the mid-70's on the 8th but would fall on the 9th with the passing of the cold front. They rose slightly on the 10th and 11th, returning to approximately normal temperatures. Most of the rain from the front fell late on the 8th and throughout the day on the 9th. Many counties received small accumulations once again however a few did report more than ½ inch (Lake, Porter, Wayne, Randolph). The rain was quickly ushered out of the region by advancing high pressure, moving from the central U.S. over the Great Lakes. Clear conditions would persist through the 10th and into the 11th. Some showers occurred in the northwest late on the 11th in advance of the next disturbance of the month. The 12th was quite wet for all of Indiana as a result of the new synoptic low pressure system. All of the state received over 0.1 inches of rain but heavy rains in the southwest resulted in accumulations as high as 1.3 inches (Daviess County). The system actually stalled over the Mid-West and rain lingered through the 13th, however the heavier rains were in the north on this day. Most of the northern counties received at least 1 inch of rain, with northern portions of Lake, Porter, and LaPorte counties reporting close to 3.5 inches. Temperatures did begin to rise on the 13th and highs were slightly above normal. This wouldn't last. As the cold front finally started advancing once again a strong temperature gradient formed across the state. The eastern side was above or close to normal where as western areas were below normal on the 14th. With the front lingering, heavy rains once again fell in the north with as much as another 3 inches falling in LaPorte, St. Joseph, and Elkhart counties on the 14th. Temperatures continued to fall across the state on the 15th, with highs as much as 15°F below normal. With the way the front was moving, clipping the north as it progressed to the northeast, more rain fell in areas that had been drenched the previous 2 days. Another 2.5 inches of rain was reported in Lake, Porter, and LaPorte counties. Over this 3-day period (13th-15th), northwestern Indiana counties received more than 7 inches of rain! This can be attributed to a strong synoptic low pressure system merging with the remnants of Hurricane Ike. Unfortunately the areas that could use the rain did not get it.

September 16th – 24th

The tail end of the system that drenched the northwest left a few lingering showers across northern Indiana on the 16th. In most places the showers were light and short-lived. However some larger accumulations were reported in Wells and Adams counties (approximately 0.3 inches). The rest of the state was dry. Temperatures warmed on the 16th due to the departure of the cold front and high pressure moving south over the Central Plains. Highs reached the low-70's, which is slightly below normal. Highs climbed into the mid-70's on the 17th, as the high

pressure dominated the central U.S. They slowly rose each day and peaked in the low-80's, more than 5°F above normal. Due to the high pressure, conditions were dry on the 18th, 19th, and most of the 20th. Extreme southwestern counties received some rain late on the 20th due to next storm system. This system affected more Indiana areas on the 21st. Southwestern and south central counties received upwards of 0.3 inches of rain as a result of the new system on the 21st. Remnants of the system dwindled in the south early on the 22nd but additional accumulations were less than 0.05 inches. Once the system left the region, the res of the week was dry. The steady rise in temperatures that started on the 16th continued through the week, eventually settling as much as 10°F above normal on the 23rd and 24th. Highs everywhere were at least 80°F.

September 25th – 30th

A cold front clipped the state on the morning of the 25th and into the 26th, but the state received no rainfall. However temperatures did begin to slightly cool, dropping down into the mid-70's on the 25th. They'd remain there, a few degrees above normal, until the 28th when a second cold front clipped the state. Temperatures fell a bit more and settled in the low-70's, right around the normal. This system did produce a bit of rain for western and northern Indiana. Again it was very light, with accumulations below 0.10 inches on the 29th. Much more rain fell on the final day of the month. The 30th saw over 0.15 inches rain for almost the entire state. The month may have ended wet but, for many areas, that was not the theme for September.

September Summary

Temperature

Region	Temperature	Normal	Deviation
Northwest	65.7	64.6	1.2
North Central	65.9	63.9	2.0
Northeast	66.3	63.5	2.8
West Central	67.3	65.9	1.4
Central	67.2	65.3	2.0
East Central	67.1	64.5	2.6
Southwest	70.1	68.2	1.9
South Central	69.1	67.5	1.6
Southeast	69.2	66.9	2.3
State	67.6	65.7	1.9

Precipitation

Region	Precipitation	Normal	Deviation	Percent of Normal
Northwest	8.38	3.21	5.17	261
North Central	6.34	3.30	3.04	192
Northeast	4.94	3.19	1.75	155
West Central	3.67	3.03	0.64	121
Central	2.22	2.99	-0.77	74
East Central	1.88	2.79	-0.91	67

Southwest	2.86	3.13	-0.28	91
South Central	2.68	3.11	-0.43	86
Southeast	1.72	2.97	-1.25	58
State	3.88	3.09	0.79	126

Autumn-to-Date

(Same as current month)

Temperature

Region	**Temperature**	**Normal**	**Deviation**
Northwest	65.7	64.6	1.2
North Central	65.9	63.9	2.0
Northeast	66.3	63.5	2.8
West Central	67.3	65.9	1.4
Central	67.2	65.3	2.0
East Central	67.1	64.5	2.6
Southwest	70.1	68.2	1.9
South Central	69.1	67.5	1.6
Southeast	69.2	66.9	2.3
State	67.6	65.7	1.9

Precipitation

Region	**Precipitation**	**Normal**	**Deviation**	**Percent of Normal**
Northwest	8.38	3.21	5.17	261
North Central	6.34	3.30	3.04	192
Northeast	4.94	3.19	1.75	155
West Central	3.67	3.03	0.64	121
Central	2.22	2.99	-0.77	74
East Central	1.88	2.79	-0.91	67
Southwest	2.86	3.13	-0.28	91
South Central	2.68	3.11	-0.43	86
Southeast	1.72	2.97	-1.25	58
State	3.88	3.09	0.79	126

Annual-to-Date

Temperature

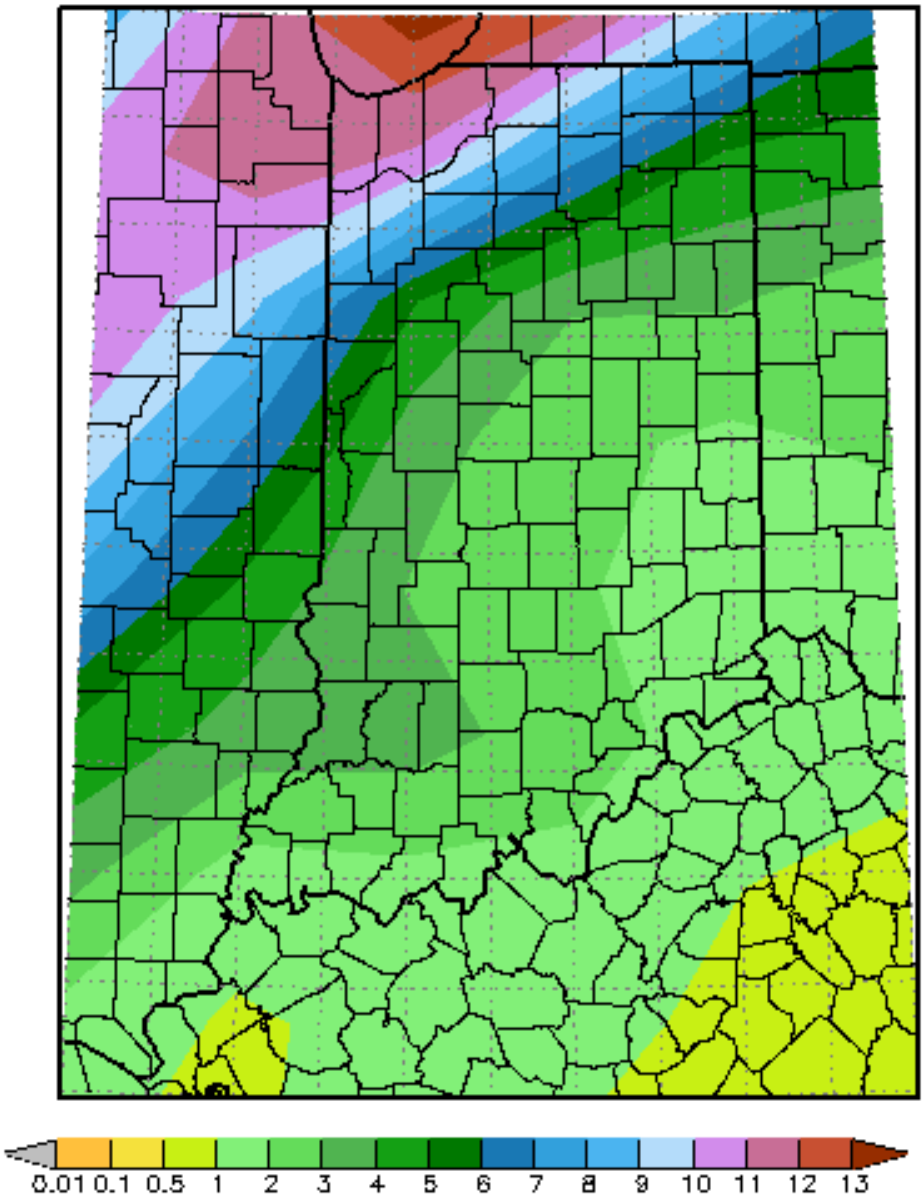
Region	**Temperature**	**Normal**	**Deviation**
Northwest	52.3	53.4	-1.1
North Central	52.3	52.9	-0.7
Northeast	52.4	52.5	-0.1

West Central	54.0	55.0	-1.0
Central	54.0	54.6	-0.5
East Central	53.5	53.7	-0.2
Southwest	57.6	58.2	-0.6
South Central	56.9	57.6	-0.7
Southeast	56.2	56.7	-0.5
State	54.4	55.0	-0.6

Precipitation

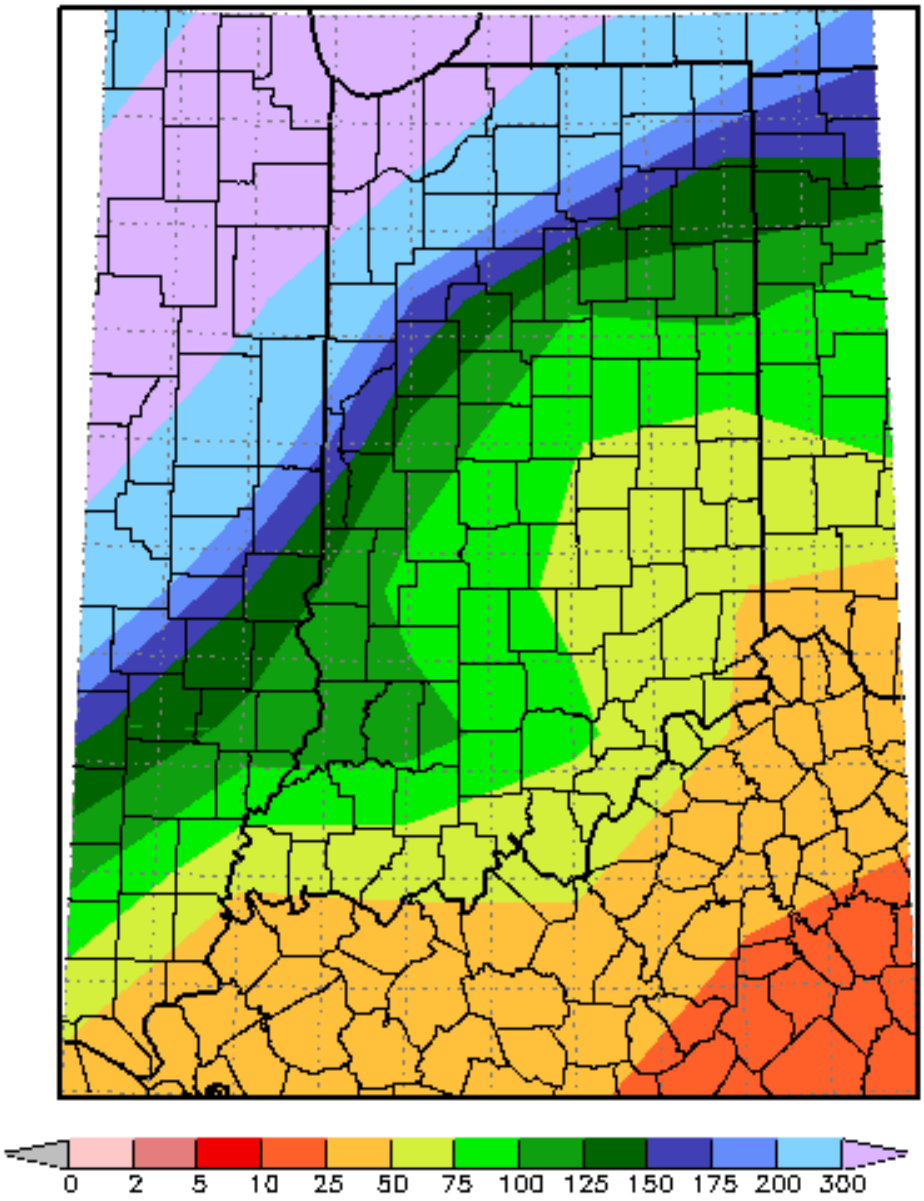
Region	Precipitation	Normal	Deviation	Percent of Normal
Northwest	39.63	29.31	10.32	135
North Central	37.84	29.32	8.52	129
Northeast	33.84	28.35	5.49	119
West Central	42.53	31.78	10.76	134
Central	42.85	31.3	11.55	137
East Central	38.27	30.28	7.99	126
Southwest	45.05	34.72	10.33	130
South Central	45.04	35.04	9.99	129
Southeast	41.55	34.03	7.52	122
State	41.13	31.64	9.49	130

Total Precipitation in Inches
September 1, 2008 to September 30, 2008



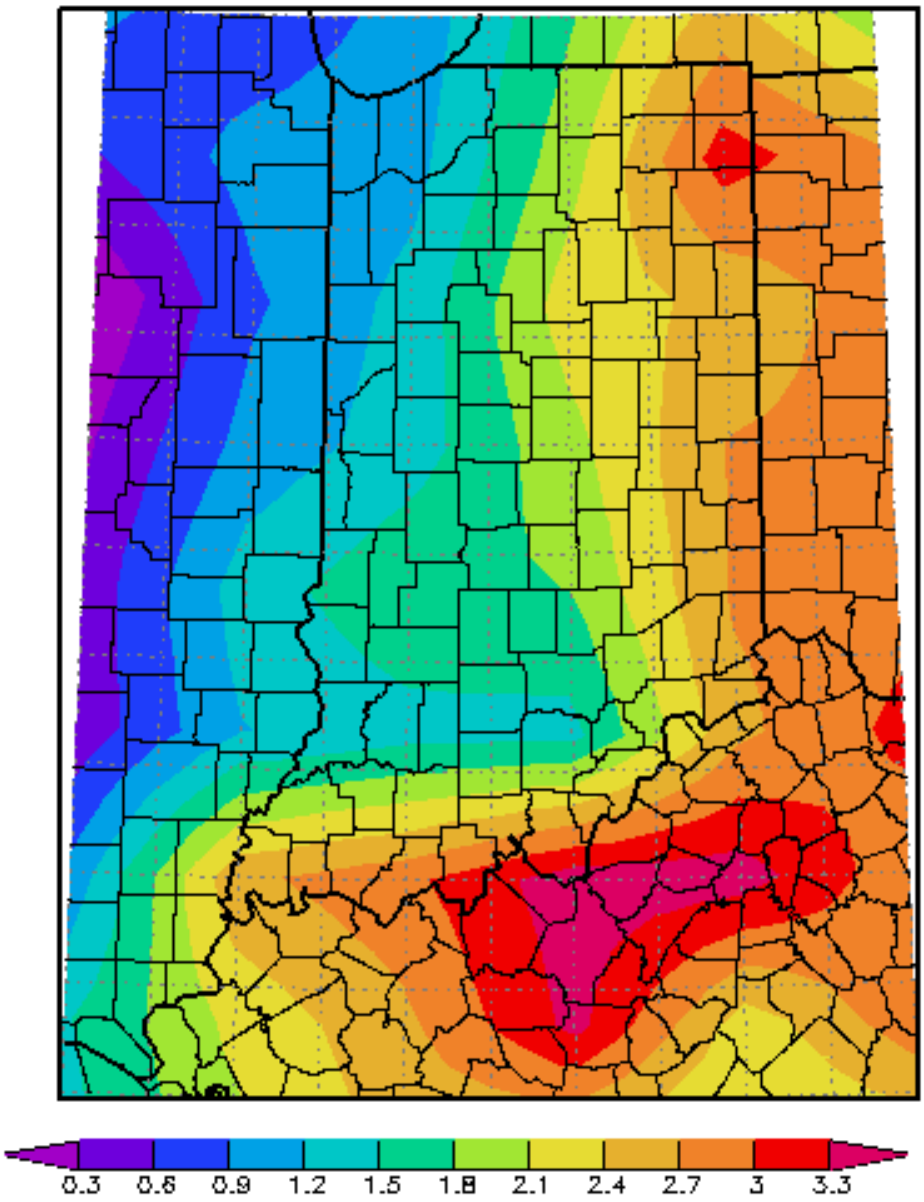
NOAA Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Total Precipitation Percent of Mean
September 1, 2008 to September 30, 2008



NOAA Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Average Temperature Departure from Mean in Degrees F
September 1, 2008 to September 30, 2008



NOAA Midwestern Regional Climate Center

Illinois State Water Survey

Champaign, Illinois

Drought Summary from the U.S. Drought Monitor

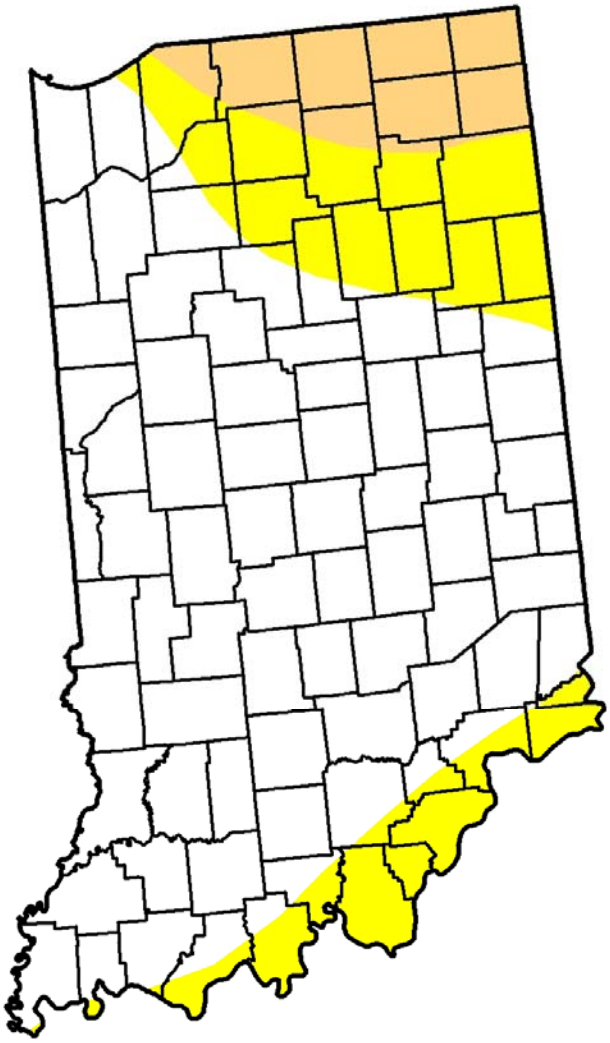
Below is a drought summary for the state of Indiana from the U.S. drought monitor. Areas in white are not experiencing any drought. Yellow areas are abnormally dry, but not entirely considered a drought. Drought begins when the moisture levels become more severe, with beige, orange, red, and brown indicating increasing levels of drought (moderate, severe, extreme, and exceptional, respectively). The table below indicates how much of the state is not under drought conditions, and also how much of the state is under drought conditions from its respective column upwards.

For example, September 2nd has 72.79% of Indiana under no drought, and 27.21% of Indiana under at *least* D0 through D4 drought status. This is followed by 8.30% as D1 through D4 status. To obtain the amount that is D0 status, simply subtract the D1-D4 column from the D0-D4 column, thus giving you the percentage of area with abnormally dry conditions. Please note, however, that these areas are not exact, and much of this drought map has been created from reports throughout the state and estimation, so use this information as a general view rather than for specifics.

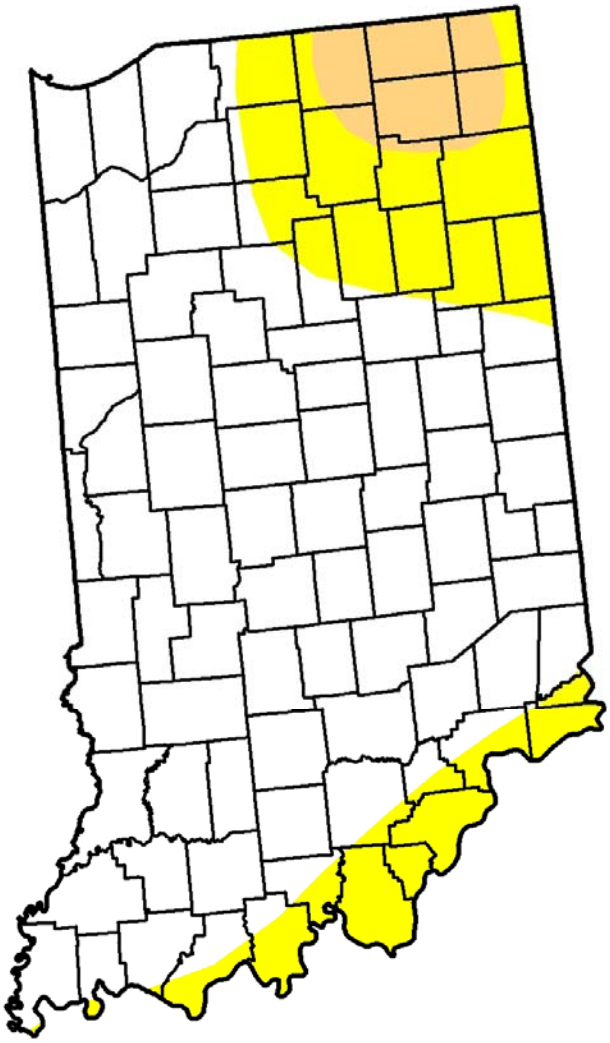
D0 Abnormally Dry D1 Drought - Moderate D2 Drought - Severe D3 Drought - Extreme D4 Drought - Exceptional

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
09/02/08	72.79	27.21	8.30	0.00	0.00	0.00
09/09/08	76.20	23.80	4.97	0.00	0.00	0.00
09/16/08	80.39	19.61	0.00	0.00	0.00	0.00
09/23/08	80.39	19.61	0.32	0.00	0.00	0.00
09/30/08	45.70	54.30	0.32	0.00	0.00	0.00

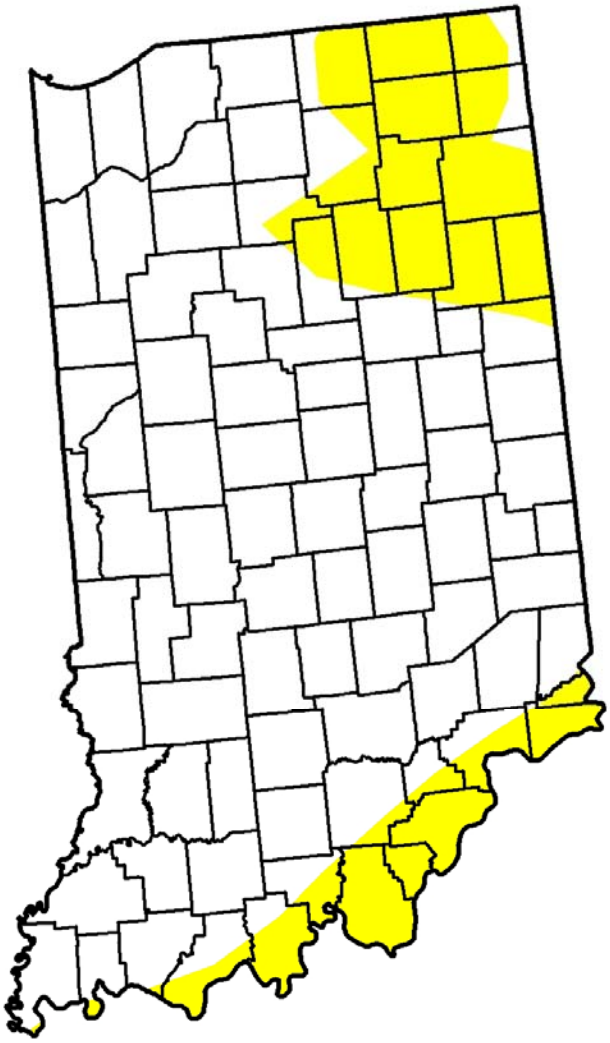
September 2nd Drought Summary



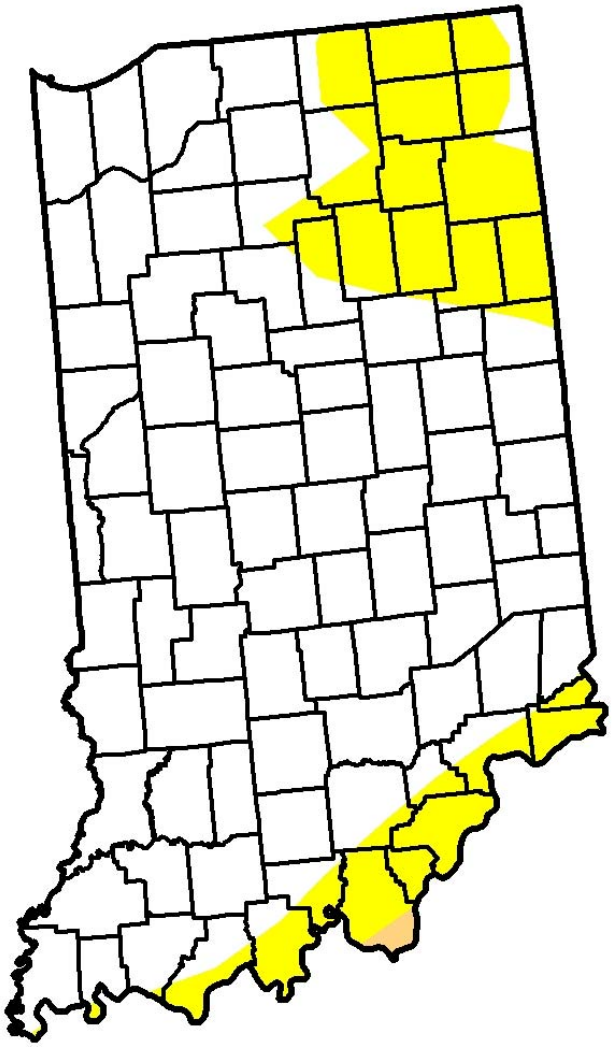
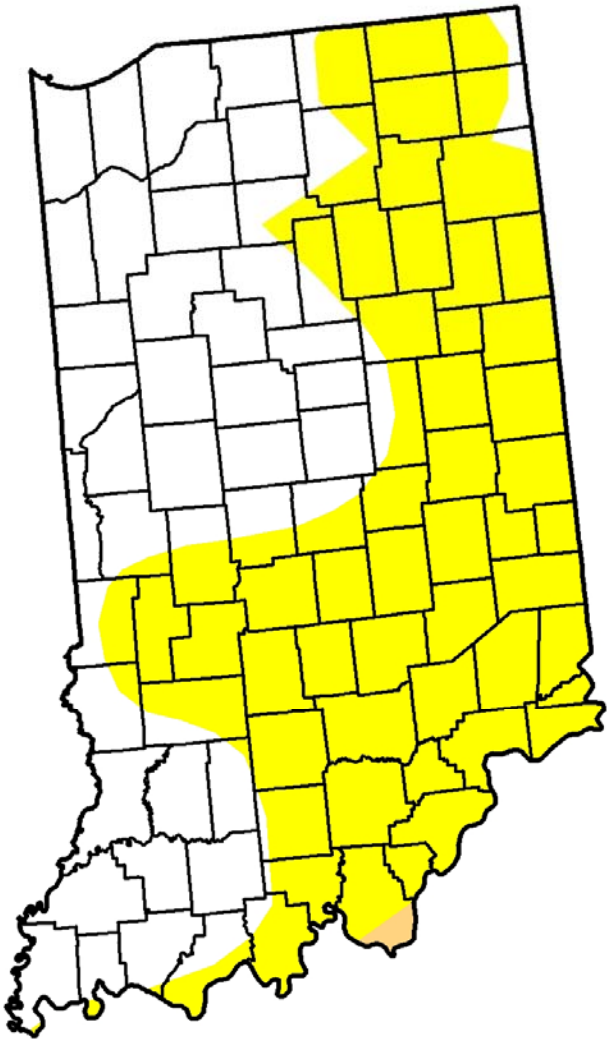
September 9th Drought Summary



September 16th Drought Summary



September 23rd Drought Summary



September 30th Drought Summary