

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		JANUARY                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		February 2, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### ...Fairly inactive hydrologic situation for January...

January was rather inactive, hydrologically speaking, for the Northern Indiana HSA. A few locations started the month in flood stage, but all fell below flood stage by the 8<sup>th</sup> of the month. The area experienced some bitter cold temperatures as the mercury fell to record levels – around -20 degrees F. In fact, most locations across the HSA saw the mercury fall below zero multiple times for the month. Benton Harbor, Goshen and the NWS office reported 8 sub-zero days, Fort Wayne reported 7 and South Bend, Defiance and Lima each reported 6 lows below zero. This helped to create average temperatures for the month some 6 to 9 degrees below normal.

For the month, the average high temperature at the Fort Wayne airport was 25.5 degrees. This was 5.5 degrees below the normal value of 31.0 degrees. The average low temperature was a chilly 7.6 degrees which was 8.5 degrees below the normal value of 16.1 degrees. For the entire month, the average temperature was 16.6 degrees which was a full 7 degrees below the normal value of 23.6 degrees. The coldest reading was -19 degrees on the 16<sup>th</sup> which tied the daily record minimum. January saw a rather snowy month at Fort Wayne. For the month, 15.5 inches were reported which was 5.6 inches above the normal value of 9.9 inches. There was 1.07 inches of liquid equivalent precipitation for the month which was 0.98 inches below normal. The greatest 24-hour precipitation was 0.38 inches from the 27<sup>th</sup> to the 28<sup>th</sup>.

The temperature numbers were similar at the South Bend airport. For the month, the average high temperature was 24.2 degrees which was 6.8 degrees below the normal value of 31.0 degrees. The average low temperature was 7.0 degrees which was 8.7 degrees below the normal of 15.7 degrees. For the entire month, the average temperature was 15.6 degrees which was 7.8 degrees below normal. The coldest reading was -19 degrees on the morning of the 16<sup>th</sup>. This tied the daily record minimum. Snowfall was above normal during the month. There was 29.4 inches of snow this month which was 6.2 inches above normal. However, the liquid equivalent was 1.57 inches which was 0.70 inches below normal. The greatest 24-hour liquid equivalent precipitation was 0.44 inches which fell from the 9<sup>th</sup> to the 10<sup>th</sup>. The greatest 24-hour snowfall was 6.5 inches on the 15<sup>th</sup>.

### ...Minor flooding recedes...

There was only minor flooding during the first week of January which was leftover flooding from December. The Kankakee River at Davis Route 30, our slowest responding river during the winter, was above flood stage until the 8<sup>th</sup>. Meanwhile, the St. Joseph River (OH) at Newville and the Tiffin River at Stryker were both above flood stage until the 3<sup>rd</sup>. All three of these sites only experienced minor flooding during January.

**...No drought conditions for the Northern Indiana HSA...**

According to the Drought Monitor dated January 26, 2009, the entire Northern Indiana HSA was not experiencing drought conditions. The Drought Monitor can be found at the following web site:  
<http://www.drought.unl.edu/dm/monitor.html>.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH            YEAR  
 JANUARY        2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	12/10/2008	01/08/2009	12.35	12/28/2008
ST. JOSEPH RIVER (OH) @ NEWVILLE	12.0	12/28/2008	01/03/2009	13.70	12/31/2008
TIFFIN RIVER @ STRYKER	11.0	12/27/2008	01/03/2009	13.86	12/30/2008

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		FEBRUARY                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		March 9, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### ...Warmer and wetter than normal month of February...

February saw warmer than normal and wetter than normal conditions across the northern Indiana HSA. An active weather pattern saw increased precipitation, but the warmer conditions meant below normal snowfall. The increased precipitation allowed a number of rivers to exceed flood stage, mainly over the northern part of the area. One location, the Kankakee River at Davis Route 30, rose above flood stage on the 3<sup>rd</sup>, and remained above flood stage for the remainder of the month. It had two distinct crests during the month. The first was at 12.58 feet on the 12<sup>th</sup> and 12.01 feet on the 28<sup>th</sup>. Both these readings were in the "Moderate" category.

For the month of February, Fort Wayne's temperatures averaged a few degrees above the climatological mean. The average monthly high temperature was 39.0 degrees which was 3.6 degrees above the normal value of 35.4 degrees. The average low temperature was 21.7 degrees which was 2.5 degrees above the normal value of 19.2 degrees. The mean temperature for the entire month was 30.3 degrees and this was 3 degrees above the normal value of 27.3 degrees. As for precipitation, the airport reported 3.70 inches of precipitation. This was 1.76 inches above the normal value of 1.94 inches. The greatest 24-hour precipitation was 2.38 inches on the 11<sup>th</sup>. As for the snow, there was 4.1 inches reported this month. This was 3.5 inches below the normal value of 7.6 inches. The greatest 24-hour snowfall total was 1.6 inches.

In South Bend, temperatures here were also above normal for the entire month. Their average high temperature was 37.2 degrees. This was 1.7 degrees warmer than the average high of 35.5 degrees. The average low temperature was 20 degrees which was 1 degree above the normal value of 19 degrees. The average temperature for the month was 28.6 degrees. This was 1.3 degrees above the normal value of 27.3 degrees. Precipitation here was also well above normal for the month. There was an even 3 inches of precipitation for the month. This was 1.02 inches above the normal value of 1.98 inches. The greatest 24-hour precipitation was 1.01 inches on the 11<sup>th</sup>. There were 12 inches of snow reported in South Bend for the month of February. This was 3.5 inches below the normal value of 15.5 inches. The greatest 24-hour snowfall total for the month was 2.8 inches.

### ...River conditions...

The combination of warmer than normal temperatures and above normal precipitation led to elevated river conditions, mainly over the northern part of the area. These areas saw a complete melting of the snowpack as well as periods of heavy rain.

Spy Run Creek in Fort Wayne exceeded its record stage. On the 11<sup>th</sup>, the creek rose to 12.5 feet. However, due to flood mitigation projects that have been completed, major damage was not reported. A total of 9 locations reported stages at or above the “Moderate” level. These locations included the Kankakee River at Davis Route 30, the Maumee River at Fort Wayne, Coliseum Blvd and New Haven, the Saint Joseph River (OH) at Newville and Montpelier, the Saint Mary’s River at Decatur, the Little River at Huntington, and the Dowagiac River at Sumnerville. There were several other locations that were near moderate stage.

### **...Drought conditions...**

The excessive rainfall across much of the area has led to very wet grounds. Drought conditions are not present and not expected.

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH YEAR  
 FEBRUARY 2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	02/03/2009	CONTINUED	12.58 12.01	02/12/2009 02/28/2009
BEAN CREEK @ POWERS	15.0	02/10/2009	02/13/2009	17.9	02/12/2009
TIFFIN RIVER @ STRYKER	11.0	02/11/2009	02/18/2009	14.75	02/13/2009
MAUMEE RIVER @ NAPOLEON	12.0	02/11/2009	02/14/2009	14.2	02/13/2009
MAUMEE RIVER @ DEFIANCE	10.0	02/11/2009	02/16/2009	14.84	02/13/2009
MAUMEE RIVER @ FORT WAYNE	17.0	02/11/2009	02/16/2009	20.39	02/12/2009
MAUMEE RIVER @ COLISEUM BLVD FORT WAYNE	17.0	02/11/2009	02/16/2009	20.86	02/12/2009
MAUMEE RIVER @ NEW HAVEN	17.0	02/11/2009	02/16/2009	21.04	02/12/2009
AUGLAIZE RIVER @ FORT JENNINGS	13.0	02/12/2009	02/13/2009	13.97	02/12/2009
AUGLAIZE RIVER @ DEFIANCE POWER PLANT	21.0	02/12/2009	02/13/2009	22.37	02/13/2009
ST. JOSEPH RIVER (OH) @ NEWVILLE	12.0	02/11/2009	02/17/2009	14.34	02/14/2009
ST. JOSEPH RIVER (OH) NEAR ST. JOE FORT WAYNE	12.0	02/11/2009	02/14/2009	13.97	02/12/2009
ST. JOSEPH RIVER (OH) @ MONTPELIER	12.0	02/12/2009	02/14/2009	13.11	02/13/2009
ST. MARY'S RIVER @ DECATUR	17.0	02/11/2009	02/16/2009	21.86	02/12/2009
ST. MARY'S RIVER @ MULDOON BRIDGE	14.0	02/11/2009	02/15/2009	16.06	02/13/2009
WABASH RIVER @ LINN GROVE	11.0	02/11/2009	02/14/2009	11.93	02/13/2009
WABASH RIVER @ WABASH	14.0	02/11/2009	02/12/2009	17.04	02/11/2009
WABASH RIVER NEAR BLUFFTON	12.0	02/11/2009	02/14/2009	13.82	02/12/2009
WABASH RIVER @ BLUFFTON	10.0	02/11/2009	02/15/2009	12.77	02/12/2009
SPY RUN CREEK @ FORT WAYNE	11.0	02/11/2009	02/12/2009	12.5	02/11/2009
SALAMONIE RIVER BELOW WARREN	12.0	02/11/2009	02/13/2009	13.83	02/12/2009
MISSISSINEWA RIVER @ MARION	12.0	02/12/2009	02/12/2009	12.25	02/12/2009
EEL RIVER @ NORTH MANCHESTER	9.0	02/11/2009	02/13/2009	10.80	02/12/2009
LITTLE RIVER @ HUNTINGTON	15.0	02/11/2009	02/13/2009	16.73	02/12/2009
DOWAGIAC RIVER @ SUMNERVILLE	8.0	02/10/2009	02/14/2009	9.52	02/12/2009
DOWAGIAC RIVER @ SUMNERVILLE	8.0	02/27/2009	02/28/2009	8.83	02/27/2009
ST. JOSEPH RIVER (MI) @ THREE RIVERS	7.0	02/13/2009	02/16/2009	7.38	02/13/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		MARCH                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		April 14, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

**...Well above normal rainfall creates record flooding across the Northern Indiana HSA...**

Well above normal rainfall totals, up to twice the climatological normal values, created major to record flooding across a large part of the Northern Indiana HSA. Temperatures averaged anywhere from 2 to 5 degrees above normal, so nearly all of the precipitation fell as rain.

At the Fort Wayne Airport, the average high temperature for the month was 53.8 degrees. This was 6.4 degrees above the normal value of 47.4 degrees. The average low temperature for the month was 30.6 degrees. This was 1.8 degrees above the normal value of 28.8 degrees. The average temperature for the month was 42.2 degrees and this was 4.1 degrees above the normal of 38.1 degrees. Precipitation was slightly less than twice the normal value. There was 5.70 inches reported. This is 2.84 inches above the normal value of 2.86 inches. The greatest 24-hour rainfall total was 1.96 inches which occurred on the 8<sup>th</sup>. Only a trace of snow fell at Fort Wayne. This was 4.7 inches below normal.

At South Bend, conditions were similar to those at Fort Wayne. The average daily high was 51.5 degrees. This was 4.7 degrees above the normal value of 46.8 degrees. The average daily low was 28.7 degrees. This was 0.5 degrees above the normal value of 28.2 degrees. The average temperature for the entire month was 40.1 degrees which was 2.6 degrees above the normal value of 37.5 degrees. Precipitation here was also nearly twice the normal value. For the month, 5.55 inches of rain fell. This was 2.66 inches above the normal value of 2.89 inches. The greatest 24-hour value was 1.41 inches which occurred on the 10<sup>th</sup>. Only 0.1 inches of snow was reported at the airport. This was 8.6 inches below the normal value of 8.7 inches.

**...Significant flooding was reported on several river basins...**

The abnormally high rainfall totals led to some significant flooding across the area. The basins that were the hardest hit were the Kankakee, the Maumee, and the Tiptecanoe. There were 7 record crests established during the month of March. Of the four observation sites along the Tiptecanoe, there were three new record stages established. The following table is a summary of the record crests for the month.

<u>Site</u>	<u>New Record Stage</u>	<u>Old Record/Year</u>
-------------	-------------------------	------------------------

Kankakee River at Davis Route 30	13.8 ft	13.79 ft/1996
Bean Creek at Powers	20.2 ft	18.98 ft/2008
Cedar Creek at 18 <sup>th</sup> Street in Auburn	12.39 ft	11.29 ft/2008
Maumee River at Coliseum Blvd in Ft. Wayne	23.72 ft	23.21 ft/2008
Tippecanoe River at North Webster	6.81 ft	6.49 ft/1991
Tippecanoe River near Ora	15.72 ft	15.63 ft/2008
Tippecanoe River at Winamac	15.69 ft	15.40 ft/1985

Four of the new records replaced records that were established only last year. As of the end of March, the Kankakee River at Davis Route 30 has been in flood since February 3, 2009, a total of 59 days. It remained above flood stage as of the end of March.

**...Drought conditions...**

Due to the excess rainfall during the month, soil moisture values were well above normal values. Drought conditions are not expected for some time to come.



**FLOOD STAGE REPORT**

REPORT FOR:  
MONTH            YEAR  
MARCH            2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	02/03/2009	CONTINUED	13.8 *	03/11/2009
AUGLAIZE RIVER @ FT. JENNINGS	13.0	03/08/2009	03/10/2009	14.88	03/09/2009
AUGLAIZE RIVER NEAR DEFIANCE POWER DAM	21.0	03/09/2009	03/12/2009	24.36	03/11/2009
BEAN CREEK @ POWERS	15.0	03/09/2009	03/13/2009	20.2 *	03/11/2009
BLANCHARD RIVER @ OTTAWA	23.0	03/08/2009	03/12/2009	28.72	03/09/2009
CEDAR CREEK @ 18 <sup>TH</sup> STREET IN AUBURN	9.0	03/08/2009	03/09/2009	9.17	03/08/2009
CEDAR CREEK @ 18 <sup>TH</sup> STREET IN AUBURN	9.0	03/10/2009	03/13/2009	12.39 *	03/11/2009
DOWAGIAC RIVER @ SUMNERVILLE	8.0	03/08/2009	03/13/2009	9.74	03/11/2009
EEL RIVER @ NORTH MANCHESTER	9.0	03/08/2009	03/14/2009	14.21	03/11/2009
EEL RIVER @ ADAMSBORO	9.0	03/09/2009	03/13/2009	10.76	03/12/2009
ELKHART RIVER @ GOSHEN	7.0	03/09/2009	03/10/2009	7.69	03/09/2009
ELKHART RIVER @ GOSHEN	7.0	03/10/2009	03/15/2009	8.87	03/12/2009
FISH CREEK @ HAMILTON	9.0	03/10/2009	03/12/2009	11.24	03/11/2009
LITTLE RIVER ABOVE HUNTINGTON	15.0	03/08/2009	03/13/2009	17.12	03/11/2009
MAUMEE RIVER @ FORT WAYNE	17.0	03/08/2009	03/15/2009	23.58	03/13/2009
MAUMEE RIVER @ COLISEUM BLVD IN FORT WAYNE	17.0	03/08/2009	03/16/2009	23.72 *	03/13/2009
MAUMEE RIVER @ NEW HAVEN	17.0	03/08/2009	03/16/2009	23.68	03/13/2009
MAUMEE RIVER @ DEFIANCE	10.0	03/08/2009	03/16/2009	17.65	03/12/2009
MAUMEE RIVER @ NAPOLEON	12.0	03/09/2009	03/13/2009	16.7	03/11/2009
PIGEON RIVER NEAR SCOTT	6.0	03/09/2009	03/22/2009	7.03	03/12/2009
ST. JOSEPH RIVER (MI) @ THREE RIVERS	7.0	03/08/2009	03/20/2009	9.55	03/12/2009
ST. JOSEPH RIVER (MI) @ MOTTVILLE	8.0	03/11/2009	03/16/2009	8.64	03/13/2009
ST. JOSEPH RIVER (MI) @ ELKHART	24.0	03/09/2009	03/19/2009	26.08	03/12/2009
ST. JOSEPH RIVER (MI) @ SOUTH BEND	5.5	03/09/2009	03/21/2009	9.0	03/12/2009
ST. JOSEPH RIVER (MI) @ NILES	11.0	03/09/2009	03/19/2009	13.82	03/11/2009
ST. JOSEPH RIVER (OH) @ MONTPELIER	12.0	03/09/2009	03/14/2009	15.14	03/12/2009
ST. JOSEPH RIVER (OH) @ NEWVILLE	12.0	03/08/2009	03/18/2009	17.85	03/12/2009
ST. JOSEPH RIVER (OH) NEAR ST. JOE FORT WAYNE	12.0	03/08/2009	03/16/2009	20.38	03/12/2009
SALAMONIE RIVER BELOW WARREN	12.0	03/09/2009	03/09/2009	12.39	03/09/2009
SPY RUN CREEK @ FT. WAYNE	11.0	03/08/2009	03/08/2009	12.36	03/08/2009
SPY RUN CREEK @ FT. WAYNE	11.0	03/10/2009	03/11/2009	12.19	03/11/2009
TIFFIN RIVER @ STRYKER	11.0	03/08/2009	03/19/2009	17.96	03/12/2009
TIPPECANOE RIVER @ NORTH WEBSTER	6.0	03/11/2009	03/19/2009	6.81 *	03/14/2009
TIPPECANOE RIVER NEAR ORA	12.0	03/09/2009	03/23/2009	15.72 *	03/13/2009
TIPPECANOE RIVER @ OSWEGO	7.5	03/10/2009	03/28/2009	8.96	03/15/2009
TIPPECANOE RIVER @ WINAMAC	10.0	03/10/2009	03/22/2009	15.69 *	03/14/2009

WABASH RIVER NEAR BLUFFTON (DCP)	12.0	03/08/2009	03/09/2009	12.79	03/09/2009
WABASH RIVER @ BLUFFTON	10.0	03/09/2009	03/10/2009	11.6	03/09/2009
WABASH RIVER @ BLUFFTON	10	03/10/2009	03/11/2009	10.8	03/11/2009
WABASH RIVER @ WABASH	14.0	03/08/2009	03/09/2009	16.73	03/08/2009
WABASH RIVER @ WABASH	14.0	03/11/2009	03/11/2009	14.76	03/11/2009
YELLOW RIVER @ PLYMOUTH	13.0	03/10/2009	06/14/2009	14.72	03/12/2009
YELLOW RIVER @ KNOX	10.0	03/11/2009	03/15/2009	12.19	03/12/2009
ST. MARY'S RIVER @ DECATUR	17.0	03/08/2009	03/13/2009	21.88	03/09/2009
ST. MARY'S RIVER @ MULDOON BRIDGE	14.0	03/08/2009	03/13/2009	16.98	03/11/2009

\* Denotes record crest

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		FEBRUARY                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		May 13, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### ...Another active month in terms of hydrology...

The month of April was yet another active month in terms of river flooding across the Northern Indiana HSA. Heavy rains across the northern and eastern parts of the area resulted in numerous spots exceeding flood stage, although most areas reported only minor flooding. The Kankakee River at Davis Route 30 ended its string of days above flood stage at 83 when it went below flood stage on the 26<sup>th</sup>. However, additional rains caused it to climb above flood stage on the 28<sup>th</sup> where it remained through the end of the month.

The month of April saw slightly below normal high temperatures at Fort Wayne and slightly above normal low temperatures. For the month, the average high temperature was 59.2 degrees. This was 0.6 degrees below the normal value of 59.8 degrees. The average low temperature was 40 degrees which was 1.8 degrees above the normal value of 38.2 degrees. This led to a mean temperature of 49.6 degrees which was about a half a degree above the normal value of 49 degrees.

It was a rather wet month for the city of Fort Wayne. The monthly total at the airport was 5.94 inches. This was 2.40 inches above the normal value of 3.54 inches. The greatest 24-hour rainfall total was 1.96 inches on the 5<sup>th</sup> to the 6<sup>th</sup>. There was 1.5 inches of snow which was 0.4 inches above the normal value of 1.1 inches.

“Near normal” can be a concise characterization for the conditions at South Bend for April. The average high temperature for the month was 58.7 degrees which was 0.2 degrees below the normal value of 58.9 degrees. The average low temperature was 38.1 degrees which was 0.4 degrees above normal. The mean temperature for the month was 48.4 degrees. This was only 0.1 degree above normal for the entire month.

Rainfall and snowfall totals were very close to normal as well. There was 3.57 inches of rain at the airport in April. This was 0.05 inches below the normal value of 3.62 inches. The greatest 24-hour rainfall total was 0.84 inches on the 5<sup>th</sup> and 6<sup>th</sup>. Only 2 inches of snow was observed during the month. This was 0.3 inches above the normal value of 1.7 inches.

### ...River conditions...

The heavy rain that occurred the first week of April led to a number of rivers rising above flood stage. The Tippecanoe River, the Wabash River, the Maumee and both St. Joseph Rivers climbed above the flood stage during the month. For the most part, the rivers were only above flood stage for a very brief amount of time, and the severity of the flooding was characterized as “minor.” As was mentioned above, the Kankakee River at Davis Route 30 ended its prolonged period of above flood stage. Although the string was broken at 83 days, it rose above flood stage a couple of days later and spent 86 of the previous 88 days above flood stage.

### **...Soil and drought conditions...**

Heavy rains during the late winter and early spring months led to abundant soil moisture across the region. In fact, farmers have been delayed in getting their crops planted. Drought conditions are not present and are not anticipated for quite some time.

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH YEAR  
 APRIL 2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	02/03/2009	04/26/2009	12.39	04/07/2009
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	04/28/2009	CONTINUED	10.95	04/30/2009
DOWAGIAC RIVER @ SUMNERVILLE	8.0	04/28/2009	04/29/2009	8.25	04/28/2009
EEL RIVER @ NORTH MANCHESTER	9.0	04/06/2009	04/08/2009	10.56	04/06/2009
LITTLE RIVER ABOVE HUNTINGTON	15.0	04/06/2009	04/07/2009	15.19	04/06/2009
MAUMEE RIVER @ FORT WAYNE	17.0	04/06/2009	04/08/2009	18.39	04/07/2009
MAUMEE RIVER @ COLISEUM BLVD FORT WAYNE	17.0	04/06/2009	04/09/2009	19.15	04/07/2009
MAUMEE RIVER @ NEW HAVEN	17.0	04/06/2009	04/09/2009	19.0	04/07/2009
MAUMEE RIVER @ DEFIANCE	10.0	04/07/2009	04/07/2009	10.22	04/07/2009
PIGEON RIVER NEAR SCOTT	6.0	04/07/2009	04/12/2009	6.2	04/07/2009
SAINT MARY'S RIVER @ DECATUR	17.0	04/06/2009	04/08/2009	18.82	04/06/2009
SALAMONIE RIVER BELOW WARREN	12.0	04/06/2009	04/07/2009	12.49	04/06/2009
SPY RUN CREEK @ FT. WAYNE'S CHILDRENS ZOO	11.0	04/05/2009	04/06/2009	12.09	04/06/2009
ST. JOSEPH RIVER (MI) @ THREE RIVERS	7.0	04/08/2009	04/12/2009	7.37	04/08/2009
ST. JOSEPH RIVER (MI) @ SOUTH BEND	5.5	04/06/2009	04/10/2009	6.0	04/07/2009
ST. JOSEPH RIVER (MI) @ NILES	11.0	04/07/2009	04/07/2009	11.07	04/07/2009
ST. JOSEPH RIVER (OH) @ MONTPELIER	12.0	04/08/2009	04/08/2009	12.19	04/08/2009
ST. JOSEPH RIVER (OH) NEAR ST. JOE FORT WAYNE	12.0	04/06/2009	04/08/2009	13.62	04/07/2009
ST. JOSEPH RIVER(OH) @ NEWVILLE	12.0	04/06/2009	04/11/2009	13.25	04/08/2009
TIFFIN RIVER @ STRYKER	11.0	04/06/2009	04/11/2009	12.48	04/08/2009
TIFFIN RIVER @ STRYKER	11.0	04/23/2009	04/23/2009	11.01	04/23/2009
TIPPECANOE RIVER @ OSWEGO	7.5	04/06/2009	04/17/2009	7.88	04/11/2009
TIPPECANOE RIVER @ ORA	12.0	04/07/2009	04/11/2009	12.63	04/08/2009
TIPPECANOE RIVER @ WINAMAC	10.0	04/08/2009	04/09/2009	10.05	04/09/2009
WABASH RIVER @ BLUFFTON	10.0	04/06/2009	04/07/2009	11.02	04/06/2009
WABASH RIVER @ BLUFFTON	10.0	04/08/2009	04/08/2009	10.21	04/08/2009
WABASH RIVER NEAR BLUFFTON (DCP)	12.0	04/06/2009	04/06/2009	12.26	04/06/2009
WABASH RIVER @ WABASH	14.0	04/06/2009	04/06/2009	14.38	04/06/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		MAY                              2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		June 18, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### **...Relatively quiet across the Northern Indiana HSA...**

The month of May was relatively quiet as far as hydrology goes. Rainfall totals across the area were all below normal values, and when rain did occur, amounts were generally light. The one exception was the 24-hour period from May 15 to May 16 in South Bend when nearly an inch and a quarter of rain fell. The Kankakee River at Davis Route 30 began the month above the flood stage, but returned to below flood stage at the end of the first week of May.

For the month, the Fort Wayne airport saw temperatures that were fairly close to climatological means. The average high temperature was 72.1 degrees which was 0.5 degrees above the normal value of 71.6 degrees. The average low temperature was 48.3 degrees. This was 0.8 degrees below the normal value of 49.1 degrees. The average temperature for the month, however, was 60.2 degrees which was only 0.2 degrees below the normal value of 60.4 degrees. After several months of above normal precipitation, May was below normal. There was 2.01 inches of rain reported last month. This was nearly an inch and three-quarters (1.74 inches) below the normal value of 3.75 inches. The greatest 24-hour total was 0.89 inches in the period of the 13<sup>th</sup> to the 14<sup>th</sup>.

The numbers at South Bend weren't much different from those at Fort Wayne. The average high temperature was 70.4 degrees. This was 0.3 degrees below the normal value of 70.7 degrees. The average low temperature was 48.0 degrees which was 0.4 degrees below the normal value of 48.4 degrees. For the entire month, the average temperature was 59.2 degrees. This was 0.4 degrees below the normal value of 59.6 degrees. Rainfall was below normal as well. For the month, 2.82 inches of rain was recorded at the airport. This was 0.68 inches below the normal value of 3.50 inches. The greatest 24-hour total was 1.19 inches from the 15<sup>th</sup> to the 16<sup>th</sup>.

### **...Only minor flooding was reported during the month...**

For the most part, the rivers remain within their banks during the month due to the limited rainfall. The Kankakee River at Davis Route 30 was in flood twice during the month although one occurrence was a continuation of flooding from April. The Tippecanoe River saw three locations exceed flood stage. These were points at Ora, Winamac, and Norway. The flooding at Norway was first since the flood

stages were established earlier this year. Additionally, the St. Joseph River (MI) at Three Rivers as well as the Pigeon River at Scott exceeded flood stage last month.

**...Drought conditions across the HSA...**

Due to abundant rainfall from earlier months, the Northern Indiana HSA was not experiencing drought conditions. According the latest soil moisture conditions map from the Climate Prediction Center ([http://www.cpc.noaa.gov/products/Soilmst\\_Monitoring/US/Soilmst/Soilmst.shtml](http://www.cpc.noaa.gov/products/Soilmst_Monitoring/US/Soilmst/Soilmst.shtml)), soil moisture remained abundant across the region.

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH            YEAR  
 MAY                2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	04/28/2009	05/06/2009	11.0	05/01/2009
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	05/14/2009	05/23/2009	12.12	05/16/2009
PIGEON RIVER @ SCOTT	6.0	05/17/2009	05/18/2009	6.13	05/17/2009
ST. JOSEPH RIVER (MI) @ THREE RIVERS	7.0	05/19/2009	05/20/2009	7.63	05/20/2009
TIPPECANOE RIVER @ ORA	12.0	05/17/2009	05/22/2009	13.32	05/18/2009
TIPPECANOE RIVER @ WINAMAC	10.0	05/18/2009	05/21/2009	10.75	05/19/2009
TIPPECANOE RIVER @ NORWAY	11.5	05/16/2009	05/17/2009	12.09	05/16/2009



<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		JUNE                              2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Michael Rehbein Service Hydrologist
		DATE  July 14, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### ...June starts out wet but ends up dry...

The month of June started off rather wet across the Northern Indiana Hydrologic Service Area. In a continuation of the wet pattern from May, more than three inches of rain fell at South Bend in the first half of June and Fort Wayne received more than an inch and a half. However, the remainder of the month was dry as high pressure built in across the region. Temperatures averaged fairly close to normal values for the entire month.

At Fort Wayne, the average high temperature was 80.4 degrees which was 0.2 degrees below the normal value of 80.6 degrees. The low temperatures averaged 60.5 degrees. This was 1.7 degrees above the normal value of 58.8 degrees. The average temperature for the entire month was 70.5 degrees which was 0.8 degrees above the normal value of 60.7 degrees. Precipitation was slightly below the normal values. For the month, 3.75 inches of rain fell at the airport. This was 0.29 inches below the normal value of 4.04 inches. The greatest 24-hour total was 1.23 inches which fell on the 8<sup>th</sup>.

South Bend temperatures were close to those values at Fort Wayne, but it was significantly wetter. The average high temperature was 78.5 degrees. This was 1.1 degrees below the normal value of 79.6 degrees. The average low temperature was 59.6 degrees which was 1.3 degrees above the normal value of 58.3 degrees. For the month, the average temperature was 69.0 degrees which matched the normal value. There was 6.76 inches of rainfall at the South Bend airport. This was more than two and a half inches above the normal value of 4.19 inches. The greatest 24-hour total was 2.81 inches on the 11<sup>th</sup>.

### ...Northern Indiana rivers well behaved in June...

Overall, rivers across the Northern Indiana HSA were well behaved. There were only a handful of sites that exceeded flood stage. With the exception of the Tiffin River @ Stryker, the sites that did exceed flood stage were only a few inches above flood stage. The Tiffin River crested about an inch and a quarter above flood stage.

### ...Drought conditions...

Soil moisture conditions remained in the normal range for the month, but with a dry second half of the month, moisture values appear to be decreasing. Vegetation that is not irrigated is becoming increasingly stressed. The latest Drought Monitor indicates normal conditions, but is likely to indicate increasingly dry conditions unless significant rain occurs.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 JUNE                              2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @DAVIS ROUTE 30	10.0	06/20/2009	06/22/2009	10.13	10/21/2009
DOWAGIAC RIVER @ SUMNERVILLE	8.0	06/20/2009	06/20/2009	8.09	06/20/2009
BEAN CREEK @ POWERS	15.0	06/20/2009	06/20/2009	15.0	06/20/2009
ST. JOSEPH RIVER (OH) @ MONTPELIER	12.0	06/21/2009	06/22/2009	12.14	06/22/2009
TIFFIN RIVER @ STRYKER	11.0	06/20/2009	06/25/2009	12.19	06/23/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		JULY                              2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Michael Rehbein Service Hydrologist
		DATE August 13, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### **...Record setting month across the Northern Indiana HSA...**

July was a record cold month across much of northern Indiana, southern Lower Michigan, and northwest Ohio. Temperatures were well below normal as the area experienced a northwest flow regime. Average temperatures were 4 to 5 degrees below climatological normal values. With the exception of Fort Wayne, rainfall totals were generally below normal values. This lack of rainfall was contributing to drying conditions. Although not quite drought conditions, the soil could be characterized as abnormally dry.

For the month, average high temperatures at Fort Wayne were 79.2 degrees. This was 5.1 degrees below the normal value of 84.3 degrees. The average low temperatures were 58.5 degrees which was 4.0 degrees below the normal value of 62.5 degrees. The average temperature for the month was a cool 68.9 degrees. This was 4.5 degrees below the normal value of 73.4 degrees and was a record cold month. The previous record for the month of July was 69.7 degrees which was established in 1967. Precipitation was slightly above normal for the month thanks to a rainfall on the 16<sup>th</sup> and 17<sup>th</sup> that totaled 1.65 inches. The monthly total was 4.22 inches which was 0.64 inches above the normal value of 3.58 inches. The 1.65 inch rainfall was the greatest 24-hour total for the month.

Record cold temperatures were also recorded at South Bend. For the month, the average high temperature was 77.9 degrees. This was 5.2 degrees below the normal value of 83.1 degrees. The average low temperatures were 58.6 degrees and this was 4.2 degrees below the normal value of 72.8 degrees. The average for the month was 68.3 degrees which was 4.7 degrees below the normal value of 73.0 degrees. This broke the previous record for the coldest month of July. The previous record was 68.5 degrees as was established in 1996.

### **...No river flooding across the Northern Indiana HSA...**

Due to the low precipitation amounts across the area, there was no flooding across northern Indiana, southwest Lower Michigan or northwest Ohio. Rivers remained generally low, but remained above record low flow values.

### **...Abnormally dry conditions across the area...**

The lack of rainfall across the area was leading to abnormally dry conditions, especially across southern Lower Michigan and northwest Ohio. Crops were noticeably stressed and lawns that are not irrigated were showing signs of going into dormancy. The latest Drought Monitor indicated there were “Abnormally Dry” conditions across northwest Ohio and southwest Lower Michigan.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 JULY                              2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
NO FLOODING					

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		AUGUST                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		September 8, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

**...Wetter than normal conditions prevailed across the northern Indiana HSA in August...**

Cooler than normal conditions were observed once again across northern Indiana, southern Lower Michigan, and northwest Ohio in August. After a record cool July, temperatures in August averaged about 2 degrees below normal levels. This was due in part to a large number of rainy days across the area. Record rainfall was recorded at both South Bend and Fort Wayne this month.

For the month of August, the average high temperature at the Fort Wayne airport was 79.6 degrees. This was 2.2 degrees below the normal value of 81.8 degrees. The average low temperature was 59.8 degrees. This was 0.6 degrees below the normal value of 60.4 degrees. The average temperature for the month was 69.7 degrees...and this was 1.4 degrees below the normal value of 71.1 degrees. There was 4.24 inches of rain reported at the airport for the month. This was 0.64 inches above the normal value of 3.60 inches. The greatest 24-hour rainfall total was 3.28 inches on the 17<sup>th</sup> and 18<sup>th</sup>...3.24 inches of this fell on the 17<sup>th</sup> which broke the daily rainfall record for that date.

In South Bend, conditions were rather similar to those at Fort Wayne. The average high temperature was 78.5 degrees which was 2.2 degrees below the normal value of 80.7 degrees. The average low was 60 degrees. This was 1.3 inches below the normal value of 61.3 degrees. This resulted in an average temperature of 69.3 degrees which was 1.7 degrees below the normal value of 71 degrees. Rainfall totals nearly doubled the average value at the South Bend airport. There was 7.08 inches reported for the month. This was 3.1 inches above the normal value of 3.98 inches. The greatest 24-hour rainfall total was 2.83 inches on the 16<sup>th</sup> and 17<sup>th</sup>. Of this amount, 2.70 inches fell on the 17<sup>th</sup> which broke the daily rainfall record for the 17<sup>th</sup>.

**...Despite the record rains, rivers remain relatively well behaved...**

With record rains, one would expect multiple rivers to rise above flood stage. This was not the case across the northern Indiana HSA. The prolonged dry conditions of the summer had led to streamflow conditions that were well below normal. With the extremely dry conditions, the ground was able to soak up a significant amount of the rain that fell, leaving a significantly reduced amount of water available for runoff. Spy Run Creek at the Fort Wayne Children's Zoo was one spot that reported levels exceeding flood stage. However, that lasted only for a couple of hours before the creek receded to below flood

stage. The Tippecanoe River at Oswego was the only other river that exceeded flood stage. The Kankakee River at Davis Route 30 may have briefly exceeded flood stage, but due to an equipment outage, the stage data were not available for the second part of the month.

**...Abnormally dry conditions eased during August...**

The abundant rainfall that was observed across the region resulted in increased soil moisture values. There was only a small area in the extreme southeastern part of the HSA that missed a large part of the rain that remained "Abnormally dry." This information was taken from the latest Drought Monitor that was issued September 1, 2009.



NWS Form E-3  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL WEATHER SERVICE

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR

AUGUST                      2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
SPY RUN CREEK	11.0	08/17/2009	08/18/2009	11.71	08/18/2009
TIPPECANOE RIVER @ OSWEGO	7.5	08/19/2009	08/24/2009	7.55	08/21/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		SEPTEMBER              2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		October 9, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

**...Below normal rainfall leads to dry conditions...**

Rainfall was below normal across the Northern Indiana HSA in September. Totals for the month were from an inch and a half to more than three inches below normal. Area rivers were not even close to flood stage at any time during the month. Overall, temperatures were fairly close to normal values.

In Fort Wayne, average high temperatures were 75 degrees. This was 0.4 degrees below the normal value of 75.4 degrees. The average low temperatures were 54.5 degrees. This was 1.7 degrees above normal. This resulted in an average temperature of 64.8 degrees which was 0.7 degrees above normal. For the month, the Fort Wayne Airport recorded 1.41 inches of rainfall. This was 1.40 inches below the normal value of 2.81 inches. The greatest 24-hour rainfall total was 0.54 inches on the 8<sup>th</sup>.

South Bend saw temperatures slightly above normal values last month. The average high temperature was 74.1 degrees. This was 0.5 degrees above the normal value of 73.6 degrees. The average low temperature was 53.8 degrees. This was 0.5 degrees above the normal value of 53.3 degrees. This resulted in an average temperature of 63.9 degrees which was also 0.5 degrees above the normal. Rainfall was well below normal for the month of September. The airport received only 0.48 inches of rain during the month. This was 3.31 inches below the normal value of 3.79 degrees! The greatest 24-hour total was 0.22 inches on the 22<sup>nd</sup>.

**...River levels below normal...**

As a result of the lack of rainfall, all rivers across the Northern Indiana HSA were well below normal. There were no instances where rivers were close to flood stage or even bankfull. However, the river levels remained above low water records.

**...Abnormally dry conditions across the area...**

According to the latest Drought Monitor, issued September 29<sup>th</sup>, most of the Northern Indiana HSA was abnormally dry (D0). The only part of the area that was not in the D0 category was southern Lower Michigan.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 SEPTEMBER              2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
NO FLOODING OBSERVED					

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		OCTOBER                      2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Michael Rehbein, Service Hydrologist
		DATE
		November 13, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### **...Another quiet hydrologic month for the Northern Indiana HSA...**

Although precipitation values were above normal for the month of October across the Northern Indiana HSA, rivers for the most part remained in their banks. In fact, only one river managed to exceed flood stage and that was the Kankakee River at Davis Route 30. There were a couple of others that neared flood stage (the Dowagiac River at Sumnerville and Spy Run Creek at Fort Wayne) but remained just below flood levels. Rivers had been running significantly below normal levels, but this rain helped to bring rivers to at or slightly above normal levels.

The area continued to see below normal temperatures. Afternoon temperatures averaged 4 to 6 degrees below normal and overnight lows were about a degree below normal. At Fort Wayne, the average high temperature was 58.6 degrees. This was 4.4 degrees below the normal value of 63 degrees. The average low temperature was 40.9 degrees which was 0.9 degrees below the normal value of 41.8 degrees. The average temperature for the entire month was 49.8 degrees. This was 2.6 degrees below the normal value of 52.4 degrees. The rainfall total for the month at Fort Wayne was nearly twice the normal value. There was 5.17 inches reported during the month. This was 2.54 inches above the normal value of 2.63 inches. The greatest 24-hour rainfall total was 1.54 inches on the 22<sup>nd</sup> and 23<sup>rd</sup>. There was no snowfall reported.

At the South Bend airport, afternoon high temperatures averaged 56.2 degrees. This was 5.6 degrees below the normal value of 61.8 degrees. The average low temperature was 41.4 degrees. This was 0.9 degrees below the normal value of 42.3 degrees. The average temperature for the month was 48.8 degrees. This represents a departure of 3.3 degrees from the normal value of 52.1 degrees. South Bend also received more than 5 inches of rain for the month (5.16 inches). This was 1.89 inches above the normal value of 3.27 inches. The greatest 24-hour total was 1.53 inches from the 22<sup>nd</sup> to the 23<sup>rd</sup>. There was no snowfall reported at South Bend.

### **...Only river exceeded flood stage this month...**

Given the dry conditions that were present at the beginning of October, area rivers were able to handle the above normal rainfall totals across the area. The only river point to exceed flood stage was the Kankakee River at Davis Route 30. It surpassed flood stage on the 31<sup>st</sup> and remained above flood into

the start of November. Flood stage is 10 feet, and the river crested at 10.78 feet on the 31<sup>st</sup>. The Dowagiac River at Sumnerville and Spy Run Creek at Fort Wayne both neared flood stage, but remained slightly below flood levels.

**...Rainfall helps ease dry conditions across the area...**

The abundant rainfall during the month of October helped to ease the dry conditions that had evolved across the area. According to the latest Drought Monitor, the entire HSA was experiencing normal soil moisture levels.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 OCTOBER                      2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	10/31/2009	CONTINUED	10.78	10/31/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		NOVEMBER                  2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Michael Rehbein Service Hydrologist
		DATE December 15, 2009

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

### **...Another quiet hydrologic month for the Northern Indiana HSA...**

November was a rather quiet hydrologic month across the Northern Indiana area of responsibility. There was only one river site that was above flood stage during the month and it began the month above flood. The Kankakee River at Davis Route 30 was above flood stage at the beginning of the month from rains that occurred during October. However, just 2 days into November, the river fell below flood stage and remained that way for the remainder of the month.

After a cool October, November was significantly above normal in terms of temperatures. At the Fort Wayne airport, the average high temperature was 54.7 degrees. This was 6.2 degrees above the normal value of 48.5 degrees. The average low temperature was 36.7 degrees. This was 4 degrees below the normal value of 32.7 degrees. This resulted in a mean temperature of 45.7 degrees which was 5.1 degrees above the normal value of 40.6 degrees. Precipitation was well below normal for the month of November. The airport recorded 1.14 inches of rain for the entire month. This was 1.84 inches below the normal value of 2.98 inches. The greatest 24-hour total was 0.35 inches on the 18<sup>th</sup>. There was only a trace of snowfall that occurred on the 27<sup>th</sup>.

Conditions at South Bend were similar to those at Fort Wayne. For the month, the average high temperature was 52.8 degrees. This was 5.1 degrees above the normal value of 47.7 degrees. The average low was 35.6 degrees which was 3.0 degrees above the normal value of 32.6 degrees. This resulted in an average temperature of 44.2 degrees. This was 4.1 degrees above the normal value of 40.1 degrees. November was a dry month at South Bend. On an average year, 3.39 inches of liquid precipitation falls at the airport. This year, only 1.32 inches was reported. This was 2.07 inches below normal. The greatest 24-hour total was 0.56 inches from the 24<sup>th</sup> to the 25<sup>th</sup>. No snow was reported at South Bend. This was 7.7 inches below normal.

### **...Very little flooding activity occurred this month...**

There were only 2 days in which flooding occurred in the IWX HSA. This was the 2 day period on the 1<sup>st</sup> and 2<sup>nd</sup> when the Kankakee River at Davis Route 30 exceeded its 10 foot flood stage. This was a continuation of minor flooding from October.

**...Normal soil moisture values prevail last month...**

According to the December 1, 2009 version of the Drought Monitor, the entire Northern Indiana HSA was experiencing normal soil moisture. This was good news for local farmers as they raced to harvest their crops before winter. The Drought Monitor can be found at the following web address:  
<http://drought.unl.edu/DM/MONITOR.HTML>



NWS Form E-3  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

U.S. DEPARTMENT OF COMMERCE  
 NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
 NATIONAL WEATHER SERVICE

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 NOVEMBER                  2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS ROUTE 30	10.0	10/31/2009	11/02/2009	10.78	10/31/2009

<b>NWS Form E-5</b> (04-2006) (PRES. BY NWS Instruction 10-924)	<b>U.S. DEPARTMENT OF COMMERCE</b> <b>NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION</b> <b>NATIONAL WEATHER SERVICE</b>	HYDROLOGIC SERVICE AREA (HSA)
		NORTHERN INDIANA (IWX)
<b>MONTHLY REPORT OF HYDROLOGIC CONDITIONS</b>		REPORT FOR: MONTH                      YEAR
		DECEMBER              2009
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE Michael Rehbein Service Hydrologist
		DATE  January 14, 2010

*When no flooding occurs, include miscellaneous river conditions below the small box, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924).*

An X inside this box indicates that no flooding occurred within this hydrologic service area.

**...A very quiet hydrologic month again...**

December was once again a quiet hydrologic month. There were no sites that reached flood stage. Conditions were drier than normal across the western part of the HSA while the eastern parts were wetter than normal. Temperatures averaged out fairly close to climatological normal for the month.

At the Fort Wayne airport, the average high temperature was 35.3 degrees. This was half a degree below the normal value of 35.8 degrees. The average low temperature was 22.7 degrees. This was 0.4 degrees above the normal value of 22.3 degrees. The resulting mean temperature was 29 degrees and this equaled the normal value. Precipitation was exactly normal as well. There was 2.77 inches (liquid equivalent) for the month at the airport. The greatest 24-hour amount was 0.66 inches which fell on Christmas day. Snowfall at Fort Wayne was slightly above normal. There was 9.5 inches reported which was 1.2 inches above the normal value of 8.3 inches. The greatest 24-hour snowfall was 3.1 inches and the greatest snow depth was 3 inches.

At the South Bend airport, the average high temperature for the month was 33.2 degrees. This was 2.4 degrees below the normal value of 35.6 degrees. The average low for the month was 21.9 degrees. This was 0.2 degrees above the normal of 21.7 degrees. The resulting average temperature for the month was 27.6 degrees which was 1.1 degrees below normal. South Bend was fairly dry this month. There was 1.88 inches (liquid equivalent) reported for the month. This was 1.21 inches below the normal value of 3.09 inches. The greatest 24-hour amount was 0.61 inches which was reported on Christmas day. There was 11.5 inches of snow reported this month. This was 7.7 inches below the normal value of 19.2 inches. The greatest 24-hour snowfall total was 3.2 inches and the greatest snow depth was 4 inches. For the season, only the 11.5 inches of snow had fallen so far. This is 15.9 inches below the normal value of 27.4 inches.

**...No river locations approached flood stage this month...**

As a result of the rather dry start to winter, no river locations exceeded flood stage this month. There has been some ice formation on some of the usual locations, but the relatively low levels of the rivers have prevented any issues due to ice formation.

**...No drought conditions across the region...**

According to the latest Drought Monitor, the entire Northern Indiana HSA was experiencing near normal soil moisture conditions.

**NWS Form E-3**  
 (04-2006)  
 (PRES. BY NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE**  
**NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**  
**NATIONAL WEATHER SERVICE**

Hydrologic Service Area (HSA)  
 NORTHERN INDIANA (IWX)

**FLOOD STAGE REPORT**

REPORT FOR:  
 MONTH                      YEAR  
 DECEMBER                2009

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
NO FLOODING REPORTED					