

NWS Form E-5 (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)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		JANUARY 2013
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 15, 2013

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.

...Flooding rains/snowmelt return to the northern Indiana HSA...

For the first time since March 2012, river flooding was recorded across portions of northwestern Ohio and northeastern Indiana. The combination of rapid snowmelt from an earlier heavy snow event and heavy rains created conditions that led to the first floods in ten months. The flooding was confined to mainly the Upper Wabash and Maumee River basins.

The trend of warmer than normal conditions persisted at the Fort Wayne Airport. The average high temperature for the month of January was 35.9 degrees. This was 3.5 degrees above the normal value of 32.4 degrees. The average low temperature was 19.8 degrees. This was 2.4 degrees above the normal value of 17.4 degrees. This resulted in an average monthly temperature of 27.8 degrees. This is 2.9 degrees above the normal value of 27.8 degrees. Rainfall was well above normal for the month. There was 3.43 inches recorded during the month. This was 1.17 inches above the normal value of 2.26 inches. The greatest 24-hour total was 1.69 inches from the 12th to the 13th. Of this liquid equivalent, the snowfall total for the month was 2.6 inches. This was 7.5 inches below the normal value of 10.1 inches. This brought the seasonal snowfall total to 12.2 inches. This is 8.5 inches below the normal value of 20.7. The greatest 24-hour snowfall reported was 1.4 inches and the greatest snow depth was 4 inches.

Temperature and precipitation data at the South Bend Airport were similar to those at Fort Wayne. The average high temperature was 35.1 degrees for the month. This was 3.8 degrees above the normal value of 31.3 degrees. The average low temperature was 20.3 degrees which was 2.7 degrees above the normal value of 17.6 degrees. This resulted in an average monthly temperature of 27.7 degrees which was 3.3 degrees above the normal value of 24.4 degrees. The total liquid equivalent precipitation was an even 5 inches. This was more than double (2.71 inches) the normal value of 2.29 inches. The greatest 24-hour total was 2.24 inches from the 29th to the 30th. There was 11.9 inches of snow for the month. This was 8.7 inches below the normal value of 20.6 inches. This brought the seasonal total to 21 inches which was 22.1 inches below the normal value of 43.1 inches. The greatest 24-hour snowfall total was 3.1 inches and the greatest snow depth was 7 inches.

...Flooding was reported this month...

For the first time since March of 2012, flooding conditions were reported across the Northern Indiana HSA. During the middle part of the month, a storm brought heavy rain and unseasonably warm temperatures to the HSA. With temperature climbing into the 50s to around 60, rapid snowmelt to the area as the heavy rains fell. The result was minor to moderate flooding along streams of the Upper Wabash River Basin and portions of the Maumee River Basin. Most of the flooding was of the minor variety as rivers generally crested at 2 feet or less above flood stage. However, the Wabash River at Bluffton reached moderate flood stage when it crested at 14.53 feet. This was 4.53 feet above flood stage. Nearly all river sites had receded to below flood stage before the month ended. The one exception was the Kankakee River at Davis Route 30. It remained above flood stage into the early morning of February 1st.

...Beneficial rain and snow fall across the northern Indiana HSA...

After spending much of the year in drought categories above D1 (moderate drought), most of the area was experiencing drought free conditions. The exceptions were the far northern counties in Indiana, far northwest Ohio and extreme southern Lower Michigan. Drought conditions here were only D0 which are abnormally dry conditions.

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR
 JANUARY 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
Mississinewa River @ Marion	12	01/13/2013	01/15/2013	14.74	01/14/2013
Salamonie River @ Warren	12	01/13/2013	01/16/2013	14.99	01/13/2013
Wabash River @ Bluffton	10	01/13/2013	01/17/2013	14.53	01/15/2013
Wabash River near Bluffton	12	01/13/2013	01/17/2013	15.37	01/14/2013
Wabash River @ Linn Grove	11	01/13/2013	01/16/2013	13.06	01/14/2013
St. Mary's River @ Muldoon Bridge	14	01/13/2013	01/17/2013	16.83	01/15/2013
Auglaize River near Defiance Power Dam	21	01/14/2013	01/15/2013	21.53	01/14/2013
Auglaize River near Ft. Jennings	13	01/13/2013	01/15/2013	14.65	01/14/2013
Blanchard River @ Ottawa	23	01/13/2013	01/16/2013	24.41	01/14/2013
Kankakee River @ Davis Route 30	10	01/30/2013	CONTINUE	10.27	01/31/2013
Dowagiac River @ Sumnerville	8	01/30/2013	01/31/2013	8.17	01/30/2013
Tippecanoe River @ Norway	11.5	01/30/2013	01/31/2013	11.76	01/30/2013

NWS Form E-5
(04-2006)
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U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

HYDROLOGIC SERVICE AREA (HSA)

NORTHERN INDIANA (IWX)

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR

FEBRUARY 2013

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 19, 2013

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.

...Quiet hydrologic conditions return to the Northern Indiana HSA...

February saw a return to quiet hydrologic conditions across the Northern Indiana HSA. Rainfall was slightly above normal across western parts of the area while totals were slightly below normal over eastern sections of the region. Overall, temperatures were slightly below climatological normal values.

At the Ft. Wayne airport, the average high temperature for the month was 34.3 degrees. This was 2 degrees below the normal value of 36.3 degrees. Overnight lows averaged 20.6 degrees which was 0.3 degrees above the normal value of 20.3 degrees. This resulted in an average monthly temperature of 27.5 degrees which was 0.8 degrees below the normal value of 28.3 degrees. Liquid equivalent precipitation for the month was slightly below normal. There was 1.86 inches of liquid reported at the airport. This was 0.18 inches below the normal value of 2.04 inches. The greatest 24-hour amount was 1.13 inches from the 26th to the 27th. Of this precipitation, there was 8.2 inches of snowfall. This was a half inch above the normal value of 7.7 inches. This brought the seasonal total to 20.4 inches which is 8 inches below normal. The greatest 24-hour snowfall total was 2 inches on the 2nd and the greatest snow depth was 3 inches on the 4th, 5th and 6th.

The average high temperature at the South Bend airport was 34.1 degrees. This was 1 degree below the normal value of 35.1 degrees. The average low temperature was 20.4 degrees. This was 0.1 degrees below the normal value of 20.5 degrees. This resulted in an average temperature for the month of 27.3 degrees which was a half degree below the normal value of 27.8 degrees. There was 2.49 inches of liquid equivalent precipitation for the month. This was 0.54 inches above the normal value of 1.95 inches. The greatest 24-hour amount was 0.55 inches from the 26th to the 27th. Of this precipitation, there was 26.7 inches of snow. This was 15 inches above the normal value of 11.7 inches. For the season, there has been 47.7 inches of snow which is 10.4 inches below normal. The greatest 24-hour snowfall for the month was 4.3 inches and the greatest snow depth was 11 inches.

...Only one river in flood during the month...

There was only one river location that exceeded flood stage for the month. The Kankakee River at Davis Route 30 was still in flood at midnight on February 1st. The river finally fell below flood stage later in the day on the 1st.

...Drought conditions continue to improve...

The increase in precipitation over the past few months has led to a dramatic improvement in the drought conditions across the area. As of early this month, there was only a small area of abnormally dry conditions (D0) across extreme northeast Indiana and south central Lower Michigan. The rest of the area was not experiencing drought 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
 FEBRUARY 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
Kankakee River @ Davis Route 30	10	01/30/2013	02/01/2013	10.27	01/31/2013

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
MARCH 2013

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 16, 2013

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.

...Cooler and drier than normal conditions prevailed in March...

Average temperatures for the month of March were on the order of 5 degrees cooler than normal values. This was aided by storm systems that brought in cooler than normal air and above normal snowfall totals.

The average high temperature at the Fort Wayne airport was 40.2 degrees. This was well below (7.8 degrees) the normal value of 48.0 degrees. The average low temperature was 25.9 degrees. This was 2.8 degrees cooler than the normal value of 28.7 degrees. This resulted in an average temperature of 33.1 degrees which was 5.3 degrees below the normal of 38.4 degrees. Rainfall was slightly below normal at the Ft. Wayne airport. For the month, there was 2.34 inches of liquid equivalent precipitation. This was 0.37 inches below the normal value of 2.71 inches. The greatest 24-hour rainfall total was 0.88 inches on the 5th. Of this precipitation, there was 18.1 inches of snow for the month. This was 4.1 inches above the normal value of 14 inches. This brought the seasonal snowfall amount to 38.5 inches. This was 6 inches above the normal value of 32.5 inches. The greatest 24-hour snowfall was 9.0 inches on the 5th and the greatest snow depth recorded was 10 inches on the 6th.

At South Bend, the average high temperature was 39.8 degrees. This was 6.7 degrees below the normal value of 46.5 degrees. The low temperature average was 24.2 degrees which was 4.2 degrees below the normal value of 28.4 degrees. This resulted in an average temperature of 32.0 degrees for the month. This was 5.5 degrees below the normal value of 37.5 degrees. There was 1.26 inches of liquid water equivalent precipitation for the month. This was 1.16 inches below the normal value of 2.42 inches. The greatest 24-hour rainfall amount was 0.72 inches on the 5th. Of this precipitation, there was 12.2 inches of snow which was 5.1 inches above the normal value of 7.1 inches. This brought the seasonal snowfall total to 59.9 inches. This was 5.3 inches below the normal value of 65.2 inches. The greatest 24-hour snowfall was 7.7 inches and the greatest snow depth was 7 inches.

...Only minor flooding at one location...

Above normal snowfall for the month contributed to a snowpack that ranged from 7 to 12 inches. A brief warm up led to nearly complete melting of the snowpack. As a result, area rivers rose but nearly all remained below flood stage. The lone exception was the Tiffin River at Stryker. It was above flood

stage for nearly 3 days but crested at only a few inches above flood stage. The river fell below flood stage on the 16th.

...Abnormally dry area continues to shrink...

The area of drought conditions continues to shrink across the Northern Indiana HSA. As of the 2nd of April, there was only a very small area of abnormally dry conditions (D0) across extreme northeastern Indiana, south central Lower Michigan and far northwest Ohio.

NWS Form E-3
 (04-2006)
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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

MARCH 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
TIFFIN RIVER @ STRYKER	11	03/14/2013	03/16/2013	11.21	03/15/2013

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		NORTHERN INDIANA (IWX)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		APRIL 2013
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 20, 2013

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.

...Widespread flooding occurred over parts of the Northern Indiana HSA...

April 2013 saw the return to widespread flooding across the area. Heavy rains during the middle part of the month caused a number of rivers to exceed flood stage. Some locations experienced 2 or even 3 different flooding periods during the month. By the end of the month, only a few locations had not receded below flood stage.

For the month of April, the Fort Wayne airport recorded an average high temperature of 58.1 degrees. This was 2 degrees below the normal value of 60.1 degrees. The average low temperature was 37.3 degrees which was 1.6 degrees below the normal value of 38.9 degrees. This resulted in an average temperature of 48.2 degrees. This was 1.8 degrees below the normal value of 50 degrees. The temperature range for the month was a low of 20 degrees on the 3rd to a high of 81 degrees on the 9th. Rainfall for the month was well above normal. There was a total of 7.10 inches of rain. This was 3.58 inches above the normal value of 3.53 inches. The greatest 24-hour rainfall total was 2.97 inches from the 18th to the 19th. There was only a trace of snowfall for the month. This was 1.4 inches below normal. This left the seasonal total at 38.5 inches which was 5 inches above the normal value of 33.5 inches.

Conditions at the South Bend airport were similar to those at Fort Wayne. The average high temperature was 57 degrees. This was 2.5 degrees below the normal value of 59.5 degrees. The average low temperature was 36.6 degrees which was 2 degrees below the normal value of 38.6 degrees. This resulted in an average monthly temperature of 46.8 degrees. This was 2.2 degrees below the normal value of 49 degrees. The temperature range for the month was a low of 18 degrees on the 8th to a high of 81 on the 30th. Rainfall was also significantly above normal for the month. There was 5.30 inches of rain recorded at the airport which was 2.07 inches above the normal value of 3.23 inches. The greatest 24-hour rainfall total was 1.39 inches on the 24th. There was only a trace of snowfall for the month. This was 1.4 inches below normal. This left the seasonal snowfall total at 59.9 inches which was 6.7 inches below the normal value of 66.6 inches.

...Major flooding experienced this month...

Every major river basin experienced some flooding during the month of April. Some rivers such as the Eel River, St. Joseph River and the Salamonie River experienced more than one flood event during the month. There were several locations that saw river levels approach record levels. These were the Little River above Huntington, the Pigeon River near Scott and the Spy Run Creek at Fort Wayne Children's Zoo. This was major flooding at all these locations. The Eel River at North Manchester also reported major flooding this month.

...Drought conditions are no longer present...

Thanks to abundant rainfall/snowfall over the past few months, there are no areas in the Northern Indiana HSA that are experiencing any drought conditions.

FLOOD STAGE REPORT

REPORT FOR:
MONTH YEAR
APRIL 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
AUGLAIZE RIVER @ FT. JENNINGS	13	04/12/2013	04/14/2013	15.33	04/12/2013
BEAN CREEK @ POWERS	15	04/19/2013	04/22/2013	17.26	04/19/2013
BLANCHARD RIVER @ OTTAWA	23	04/12/2013	04/15/2013	27.31	04/13/2013
CEDAR CREEK @ 18 th STREET IN AUBURN	9	04/19/2013	04/20/2013	10.1	04/19/2013
DOWAGIAC RIVER @ SUMNERVILLE	8	04/17/2013 *	04/21/2013	9.11	04/19/2013
EEL RIVER @ NORTH MANCHESTER	9	04/12/2013	04/12/2013	9.15	04/12/2013
EEL RIVER @ NORTH MANCHESTER	9	04/18/2013	04/22/2013	14.46	04/19/2013
EEL RIVER @ NORTH MANCHESTER	9	04/24/2013	04/25/2013	10.53	04/24/2013
EEL RIVER NEAR LOGANSPOURT	9	04/19/2013	04/21/2013	11.27	04/20/2013
ELKHART RIVER @ GOSHEN	7	04/19/2013	04/21/2013	8.51	04/19/2013
FISH CREEK @ HAMILTON	9	04/19/2013	04/20/2013	9.95	04/19/2013
KANKAKEE RIVER @ DAVIS ROUTE 30	10	04/18/2013	04/26/2013	12.2	04/20/2013
LITTLE RIVER ABOVE HUNTINGTON	15	04/18/2013	04/22/2013	19.83	04/19/2013
MAUMEE RIVER @ FORT WAYNE	17	04/19/2013	04/21/2013	20.64	04/19/2013
MAUMEE RIVER @ COLISEUM BLVD	17	04/19/2013	04/22/2013	21.38	04/19/2013
MAUMEE RIVER @ DEFIANCE	10	04/12/2013	04/15/2013	11.29	04/13/2013
MAUMEE RIVER @ NEW HAVEN	17	04/19/2013	04/22/2013	21.14	04/19/2013
MAUMEE RIVER @ DEFIANCE	10	04/19/2013	04/22/2013	11.26	04/20/2013
MISSISSINEWA RIVER @ MARION	12	04/19/2013	04/19/2013	15.35	04/19/2013
PIGEON RIVER NEAR SCOTT	6	04/19/2013	CONTINUED	7.04	04/20/2013
ST. JOSEPH RIVER (MI/IN) @ THREE RIVERS	7	04/19/2013	CONTINUED	8.34	04/22/2013
ST. JOSEPH RIVER (MI/IN) @ ELKHART	24	04/20/2013	04/20/2013	24.01	04/20/2013
ST. JOSEPH RIVER (MI/IN) @ SOUTH BEND	5.5	04/19/2013	04/30/2013	7.8	04/20/2013
ST. JOSEPH RIVER (MI/IN) @ NILES	11	04/19/2013	04/22/2013	12.4	04/20/2013
ST. JOSEPH RIVER (MI/IN) @ NILES	11	04/24/2013	04/26/2013	11.28	04/25/2013
ST. JOSEPH RIVER (OH/IN) @ NEWVILLE	12	04/19/2013	04/29/2013	15.21	04/22/2013
ST. JOSEPH RIVER (OH/IN) NEAR ST. JOE	12	04/19/2013	04/25/2013	16.01	04/20/2013
ST. MARY'S RIVER @ DECATUR	17	04/11/2013	04/16/2013	20.39	04/12/2013
ST. MARY'S RIVER @ MULDOON BRIDGE	14	04/12/2013	04/12/2013	14.07	04/13/2013
SALAMONIE RIVER BELOW WARREN	12	04/11/2013	04/13/2013	14.22	04/11/2013
SALAMONIE RIVER BELOW WARREN	12	04/18/2013	04/20/2013	14.55	04/19/2013
SPY RUN CREEK @ FT. WAYNE CHILDREN'S ZOO	11	04/18/2013	04/19/2013	13.36	04/19/2013
TIFFIN RIVER @ STRYKER	11	04/19/2013	04/29/2013	13.79	04/21/2013
TIPPECANOE RIVER @ NORTH WEBSTER	6	04/19/2013	04/29/2013	6.55	04/21/2013
TIPPECANOE RIVER @ OSWEGO	7.5	04/20/2013	CONTINUED	8.69	04/26/2013
TIPPECANOE RIVER NEAR ORA	12	04/19/2013	CONTINUED	14.37	04/21/2013

TIPPECANOE RIVER @ WINAMAC	10	04/20/2013	04/30/2013	12.21	04/22/2013
TIPPECANOE RIVER @ NORWAY	11.5	04/18/2013	04/27/2013	14.34	04/19/2013
WABASH RIVER @ BLUFFTON	10	04/11/2013	04/16/2013	13.58	04/13/2013
WABASH RIVER @ BLUFFTON	10	04/19/2013	04/20/2013 *	10.85	04/19/2013
WABASH RIVER @ LINN GROVE	11	04/12/2013	04/15/2013	12.72	04/12/2013
WABASH RIVER NEAR BLUFFTON	12	04/11/2013	04/15/2013	14.57	04/13/2013
WABASH RIVER @ WABASH	14	04/18/2013	04/20/2013	20.68	04/19/2013
WABASH RIVER @ WABASH	14	04/24/2013	04/24/2013	14.56	04/24/2013
YELLOW RIVER @ PLYMOUTH	13	04/19/2013	04/22/2013	13.68	04/20/2013
YELLOW RIVER @ KNOX	10	04/21/2013	04/22/2013	10.05	04/22/2013

*Date estimated

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR

MAY 2013

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 21, 2013

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.

...Warm and dry weather across the Northern Indiana HSA...

May weather conditions were rather warm and a bit on the dry side. Temperatures averaged between 3 and 4 degrees above climatological normal values. Rainfall totals most generally a half to an inch and a half below normal values. This allowed flooding that was ongoing at the beginning of the month to recede and no other problems occurred during the month.

At the Fort Wayne airport, the average high temperature was 75.8 degrees which was 4.1 degrees above the normal value of 71.7 degrees. The average low temperature for the month was 53.3 degrees. This was also 4.1 degrees above the normal value of 49.2 degrees. This resulted in an average monthly temperature of 64.5 degrees which was also 4.1 degrees above the normal value of 60.4 degrees. The warmest temperature for the month was 88 degrees which occurred on the 20th, 21st and the 30th. The coolest was 36 degrees on the 12th. For the month, there was 2.94 inches of rain recorded at the airport. This was 1.33 inches below the normal value of 4.27 inches. The greatest 24-hour rainfall total was 1.73 inches from the 27th to the 28th.

Weather conditions at South Bend were similar to those at Fort Wayne last month. The average high temperature was 74.5 degrees which was 4.5 degrees above the normal value of 70 degrees. The average low temperature was 51.3 degrees. This was 2.7 degrees above the normal value of 49.6 degrees. This resulted in an average monthly temperature of 62.9 degrees which was 3.6 degrees above the normal value of 59.3 degrees. The warmest temperature recorded was 90 on the 20th and the coolest reading was 30 which occurred on the 13th. There was 3.25 inches of rain at South Bend last month. This was 0.58 inches below the normal value of 3.83 inches. The greatest 24-hour rainfall total was 0.83 inches on the 21st.

...Only flooding was residual flooding from April events...

There were a few river sites that began the month above flood stage. They were the Pigeon River near Scott, the St. Joseph River at Three Rivers and the Tippecanoe River at Oswego and Ora. All but the Tippecanoe River at Oswego had fallen below flood stage in the first three days of the month. Oswego fell below flood stage on the 6th. The relatively dry weather has been beneficial to local farmers. They were able to get into the fields and plant their crops.

...Drought conditions have not returned...

No drought conditions were reported across any where in the Northern Indiana HSA. According to the latest Drought Monitor, the nearest area that was experiencing drought conditions was in extreme southeastern Ohio. No drought conditions are expected for the area in the near future.

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR
 MAY 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
PIGEON RIVER NEAR SCOTT	6	04/19/2013	05/03/2013	7.04	04/20/2013
ST. JOSEPH RIVER (MI/IN) @ THREE RIVERS	7	04/19/2013	05/01/2013	8.34	04/22/2013
TIPPECANOE RIVER @ OSWEGO	7.5	04/20/2013	05/06/2013	8.69	04/26/2013
TIPPECANOE RIVER NEAR ORA	12	04/19/2013	05/02/2013	14.37	04/21/2013

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		NORTHERN INDIANA (IWX)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		JUNE 2013
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 22, 2013

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.

...Temperatures nearly normal while precipitation above and below normal...

High temperatures at the Fort Wayne airport averaged 80.6 degrees. This was 0.3 degrees below the normal value of 80.09 degrees. Overnight lows averaged 60.3 degrees which was 1 degree above the normal value of 59.3 degrees. This resulted in an average monthly temperature of 70.4 degrees which was 0.3 degrees above the normal value of 70.1 degrees. The highest temperature recorded during the month was 90 on the 22nd while the lowest temperature was 47 degrees on the 3rd and 4th. Rainfall for the month was quite a bit above normal for the month. There was 5.91 inches of rain recorded at the airport. This was 1.75 inches above the normal value of 4.16 inches. The greatest 24-hour precipitation total was 1.82 inches from the 29th to the 30th.

At the South Bend airport, the average high temperature was 79.3 degrees. This was 0.1 degrees below the normal value of 79.4 degrees. Overnight lows averaged 58.7 degrees which equaled the climatological normal for the month. As a result, the average monthly temperature was 69 degrees which was 0.1 degrees below the normal value of 69.1 degrees. The highest temperature reported during the month was 89 degrees on the 12th and the lowest temperature was 39 degrees on the 3rd. Precipitation was a bit lower than normal for the month. There were 3.43 inches of rainfall at the airport. This was 0.36 inches below the normal value of 3.79 inches. The greatest 24-hour precipitation total was 0.94 inches from the 25th to the 26th.

...Heavy rains bring major to record flooding across the HSA...

Heavy rains across the central and southern part of the HSA led to a significant rise in rivers across the area. The river that was the most impacted with the greatest rises was the Tippecanoe River. There were four locations along the river that exceeded Major Flood Stage during the month. These sites were Ora, Winamac and Norway. The Ora and Winamac locations saw the river exceed major flood stage twice during the month. The other site that saw levels reach major levels was the Eel River at North Manchester.

One location recorded a record stage/flow value during the month. Very heavy rains in the Fort Wayne area caused the Spy Run Creek at Ft. Wayne Children's Zoo the rapidly climb to a record stage on the 1st of the month. The creek crested at 14.57 feet with a discharge of 2360 CFS. Both of these were

record values for this location. Spy Run Creek's flooding was short lived as it was only above flood stage on the 1st of the month.

...Soil moisture continues to be near normal...

Despite the lower than normal rainfall across northern parts of the HSA, soil moisture values do not indicate any drought conditions across the area. Area crops appear to be doing fairly well although some damage occurred in low spots in areas with heavy rainfall.

FLOOD STAGE REPORT

REPORT FOR:
MONTH YEAR
JUNE 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date/Time)		CREST	
		FROM	TO	STAGE/FLOW (Feet/CFS)	DATE/TIME
EEL RIVER AT NORTH MANCHESTER – (NMC13)	9	06/01/2013 1030Z/ 6:30 AM EDT	06/03/2013 2145Z/ 5:45 PM EDT	11.77 ft. 5820 CFS	06/02/2013 0300Z/ (06/01/2013 11:00 PM EDT)
EEL RIVER AT NORTH MANCHESTER – (NMC13)	9	06/13/2013 1745Z/ 1:45 PM EDT	06/14/2013 0700Z/ 3:00 AM EDT	10.37 ft. 4457 CFS	06/13/2013 2330Z/ 7:30 PM EDT
KANKAKEE RIVER AT DAVIS ROUTE 30	10	06/30/2013 1945Z/ 3:45 PM EDT	CONTINUED	10.07 ft. 879 CFS	07/01/2013 0200Z/ (06/30/2013 10:00 PM EDT)
MAUMEE RIVER AT COLISEUM BLVD IN FORT WAYNE – (COM13)	17	06/01/2013 1500Z/ 11:00 AM EDT	06/01/2013 1845Z/ 2:45 PM EDT	17.18 ft. 12200 CFS	06/01/2013 1630Z/ 12:30 PM EDT
ST. JOSEPH RIVER (OH/IN) NEAR ST. JOE (FT. WAYNE) – (ROO13)	12	06/01/2013 1100Z/ 7:00 AM EDT	06/01/2013 1515Z/ 11:15 AM EDT	13.12 ft. 7770 CFS	06/01/2013 1300Z/ 9:00 AM EDT
SPY RUN CREEK AT FT. WAYNE CHILDREN'S ZOO – (SPY13)	11	06/01/2013 0445Z/ 12:45 AM EDT	06/01/2013 1945Z/ 3:45 PM EDT	14.57ft # 2360 CFS	06/01/2013 1030Z/ 6:30 AM EDT
TIPPECANOE RIVER AT NORTH WEBSTER – (NWT13)	6	06/01/2013 1230Z/ 8:30 AM EDT	06/02/2013 1145Z/ 7:45 AM EDT	6.18 ft. 433 CFS	06/01/2013 1600Z/ 12:00 PM EDT
TIPPECANOE RIVER NEAR ORA – (ORA13)	12	06/02/2013 0845Z/ 4:45 AM EDT	06/09/2013 0430Z/ 12:30 AM EDT	14.65 ft. 6200 CFS	06/03/2013 1745Z/ 1:45 PM EDT
TIPPECANOE RIVER NEAR ORA – (ORA13)	12	06/14/2013 0815Z/ 4:15 AM EDT	06/19/2013 0100Z/ (06/18/2013 9:00 PM EDT)	13.35 ft. 4146 CFS	06/15/2013 1900Z/ 3:00 PM EDT
TIPPECANOE RIVER AT WINAMAC – (WMC13)	10	06/02/2013 0600Z/ 2:00 AM EDT	06/08/2013 1615Z/ 12:15 PM EDT	12.74 ft. 5700 CFS	06/04/2013 1415Z/ 10:15 AM EDT
TIPPECANOE RIVER AT WINAMAC – (WMC13)	10	06/15/2013 1130Z/ 7:30 AM EDT	06/18/2013 1145Z/ 7:45 AM EDT	11.03 ft. 4231 CFS	06/16/2013 1415Z/ 10:15 AM EDT
TIPPECANOE RIVER AT NORWAY – (TCN13)	11.5	06/01/2013 0430Z/ 12:30 AM EDT	06/06/2013 1815Z/ 2:15 PM EDT	15.13 ft. (flow data not available for this location)	06/01/2013 2315Z/ 7:15 pm EDT
TIPPECANOE RIVER AT NORWAY – (TCN13)	11.5	06/13/2013 0900Z/	06/15/2013 0100Z/	13.17 ft. (flow data not	06/13/2013 1630Z/

		5:00 AM EDT	(06/14/2013 9:00 PM EDT)	available for this location)	12:30 PM EDT
# DENOTES RECORD CREST					

NWS Form E-5 (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)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		JULY 2013
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 8, 2013

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.

...Slightly cooler and drier conditions prevailed in July...

Weather conditions across the Northern Indiana HSA were characterized as slightly cooler and drier than climatological normals. Areas in the eastern part of the area experienced slightly more rainfall than the western parts. Heavy rains during the first part of the month in northwest Ohio led to flooding along the Blanchard River.

For the month of July at Fort Wayne, the average high temperature was 81.5 degrees. This was 2.9 degrees below the normal value of 84.4 degrees. The average low temperature was 62.8 degrees which was a mere 0.1 degree above normal. This resulted in an average monthly temperature of 72 degrees. This was 1.4 degrees below the normal of 73.6 degrees. The highest temperature recorded was 92 degrees on the 16th and 18th. The lowest temperature was 50 degrees on the 28th and 29th. Precipitation at the airport totaled 3.68 inches. This was 0.56 inches below the normal value of 4.24 inches. The greatest 24-hour total was 1.25 inches on the 10th.

At South Bend, the average high temperature was 81 degrees which was 1.9 degrees below the normal value of 82.9 degrees. The average low temperature was 62.5 degrees. This was 0.6 degrees below the normal value of 63.1 degrees. This resulted in an average monthly temperature of 71.8 degrees. This was 1.2 degrees below the normal of 73 degrees. The warmest reading was 94 degrees on the 19th while the lowest temperature was 50 on the 24th. The airport recorded 3.16 inches of rain which was 0.84 inches below the normal value of 4 inches. The greatest 24-hour rainfall total was 0.79 inches from the 21st to the 22nd.

...Only limited flooding this month...

Due to the below normal rainfall across the region, very little in the way of flooding occurred across the HSA in July. The only location that exceeded flood stage was the Blanchard River at Ottawa, OH. It was above flood stage for less than 48 hours and its crest was 0.73 feet above the flood stage of 23 feet.

...Drought conditions are not present or expected...

With sufficient precipitation during the Spring and Summer months, drought conditions are not occurring across northern Indiana, southwest Lower Michigan and northwest Ohio. According to the latest Drought Monitor, there is a small area of abnormally dry conditions in east central Indiana to the south of our area of responsibility.

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 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date/Time)		CREST	
		FROM	TO	STAGE/FLOW (Feet/CFS)	DATE/TIME
BLANCHARD RIVER AT OTTAWA	23	07/12/2013 0330Z/ (11:30 PM EDT 07/11/2013)	07/13/2013 1800Z/ 2:00 PM EDT	23.73 ft. 7400 CFS	07/12/2013 2000Z/ 4:00 PM EDT

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
AUGUST 2013

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 20, 2013

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.

...Drought conditions worsening across the area...

The Northern Indiana HSA experienced both heavy rains and drought conditions all during the month of August. Heavy rains occurred during the first week of the month. Then, as we progressed into the middle and latter part of the month, summertime conditions returned to the area.

Temperature conditions at the Fort Wayne airport were slightly below normal for the month. The average high temperature was 81.0 degrees which was 1.2 degrees below normal. The average low temperature was 60.5 degrees which was 0.3 degrees below normal. This resulted in an average temperature of 70.8 degrees for the month. This was 0.7 degrees below the normal value of 71.5 degrees. The highest temperature was 89 degrees on the 27th and the coolest temperature was 48 degrees on the 14th and 15th. Rainfall was significantly above normal for the month. However, the majority of that rain occurred during a 24-hour period at the beginning of the month. There was 5.08 inches of rain recorded. This was 1.44 inches above the normal value of 3.64 inches. The greatest 24-hour total was a whopping 3.75 inches from the 2nd to the 3rd.

For the South Bend airport, the average high temperature for the month was 81.2 degrees. This was 0.3 degrees above the normal value of 80.9 degrees. The average low was 59.7 degrees. This was 2 degrees below the normal of 61.7 degrees. This resulted in an average temperature of 70.4 degrees which was 0.9 inches below the normal value of 71.3 degrees. The highest temperature recorded was 93 degrees on the 27th and 30th while the lowest temperature was 46 on the 14th. Precipitation was below normal for the month. There was 3.03 inches of rain recorded at the airport. This was 0.73 inches below the normal value of 3.76 inches. The greatest 24-hour rainfall total was 1.28 inches from the 6th to the 7th.

...Only minor flooding at Spy Run Creek in Fort Wayne...

There was only 1 location in the Northern Indiana HSA that reported any flooding during the month. With a 3.75 inch rainfall in the Fort Wayne metro area on the evening of the 2nd into the morning of the 3rd, Spy Run Creek quickly rose above flood stage and crested at 12.31 feet which is just above moderate flood stage. Given the flashy nature of the creek, it was above flood stage for about 8 hours before it quickly receded. With primarily dry conditions for the remainder of the month, no other sites were even close to approaching flood stage.

...Drought conditions becoming more widespread...

Heavy rains during the first week of the month gave way to summertime heat during the middle part of the month. With readings in the upper 80s to mid 90s common, the ground quickly dried out as the crops helped to deplete soil moisture. This led to an increase of the D0, abnormally dry, area across northern Indiana, southwest Lower Michigan and northwest Ohio. Nearly the entire Northern Indiana HSA was experiencing these abnormally dry 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
 AUGUST 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date/Time)		CREST	
		FROM	TO	STAGE (Feet/Flow)	DATE/TIME
SPY RUN CREEK @ FT. WAYNE CHILDREN'S ZOO	11	08/03/2013 0130Z (08/02/2013 9:30 PM EDT)	08/03/2013 0915Z/ 5:15 AM EDT	12.31 FT 1610 CFS	08/03/2013 0545Z/ 1:45 AM EDT

NWS Form E-5 (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)
		REPORT FOR: MONTH YEAR SEPTEMBER 2013
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		SIGNATURE Michael Rehbein Service Hydrologist
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		DATE October 18, 2013

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.

...Temperatures slightly above normal while rainfall near to below normal...

Temperatures across the Northern Indiana HSA were slightly above the climatological means during the month of September. With the exception of one day of heavy rainfall across the area during the middle of the month, dry conditions prevailed across the region. This led to only slight improvement of the drought conditions.

For the month of September, the average high temperature at the Fort Wayne airport was 77.1 degrees. This was 1.1 degrees above the normal value of 76 degrees. The average low temperature was 52.5 degrees which was 0.1 degrees below the normal value of 52.6 degrees. This resulted in an average monthly temperature of 64.8 degrees. This was a half degree above the normal value of 64.3 degrees. The highest temperature was 95 degrees which occurred on the 10th and 11th. The lowest temperature was 37 degrees on the 14th. There was a total of 1.89 inches of rain for the month. This was 0.91 inches below the normal value of 2.80 inches. The greatest 24-hour total was 0.81 inches from the 18th to the 19th.

At the South Bend airport, the average high temperature for the month was also 77.1 degrees. This was 3.1 degrees above the normal value of 74 degrees. The average low temperature was 54.1 degrees which was 0.4 degrees above the normal value of 53.7 degrees. The warmest temperature for the month was 97 degrees on the 10th and the lowest temperature was 40 degrees on the 14th and 23rd. Thanks to one day of very heavy rain at South Bend, the monthly total was 4.12 inches which was 0.59 inches above the normal value of 3.53 inches. The greatest 24-hour total was 3.59 inches which occurred from the 18th to the 19th.

...No flooding reported across the region this month...

There was no flooding reported on any of the rivers or streams across the Northern Indiana HSA during month of September.

...Slight improvement in drought conditions across the HSA...

Given the fact that rainfall totals were near to slightly above normal for the month, there was only minimal improvement in drought conditions across the area. The Drought Monitor indicated that soil conditions were Abnormally Dry (D0) for nearly the entire HSA. Only a small portion of far northwest Ohio showed 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)

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR

SEPTEMBER 2013

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

NWS Form E-5 (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)	
		REPORT FOR: MONTH YEAR OCTOBER 2013	
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		SIGNATURE Michael Rehbein Service Hydrologist	
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		DATE November 15, 2013	

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.

...Very quiet hydrologic conditions during October...

October saw slightly warmer and wetter conditions than normal. There were 12 days with measureable precipitation at both Fort Wayne and South Bend, but only a couple of those days saw a half an inch or more of rain. The area saw the first snow of the season as a system during the last week of the month produced a trace of snow at Fort Wayne.

At the Fort Wayne airport, weather conditions averaged above the climatological normals for the month. The average high temperature was 64.5 degrees. This was 1.1 degrees above the normal value of 63.4 degrees. The average low temperature was 41.8 degrees which matched the normal value for the month. This resulted in an average monthly temperature of 53.1 degrees which was a half inch above the normal value of 52.6 degrees. The highest reading was 85 degrees on the 4th and the lowest was 28 degrees on the 25th. Rainfall was nearly an inch above normal. There was 3.66 inches of rain recorded at the airport. This was 0.82 inches above the normal value of 2.84 inches. The greatest 24-hour total was 1.74 inches from the 30th to the 31st. There was a trace of snow recorded at the airport which starts the season off with a trace. This was 0.3 inches below normal.

At the South Bend airport, the average high temperature was 63.2 degrees. This was 1.5 degrees above the normal value of 61.7 degrees. The average low temperature was 43.9 degrees. This was 1.3 degrees above the normal value of 42.6 degrees. This resulted in an average monthly temperature of 53.5 degrees which was 1.4 degrees above the normal value of 52.1 degrees. The highest temperature recorded was 82 degrees on the 2nd while the lowest temperature was 28 degrees on the 28th. There was 4.35 inches of rain recorded at the airport. This was 1.03 inches above the normal value of 3.32 inches. The greatest 24-hour total was 2 inches from the 30th to the 31st. Snow information was not available for South Bend this month.

...No flooding reported in any of the Northern Indiana streams...

Rainfall was spread out through the month so no flooding was observed during the month. Heavy rains during the last week of the month were easily handled by area streams as they were at relatively low levels.

...Abnormally dry drought conditions continue...

Soil moisture conditions continue to show a large area of abnormally dry conditions across the region. However, rainfall toward the end of the month helped to ease the dry conditions in some areas. As a result, the area of abnormally dry conditions has decreased in size since last month.

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)

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR

OCTOBER 2013

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

NWS Form E-5 (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)
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR NOVEMBER 2013
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 17, 2013

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.

...Cooler and drier than normal across the area...

November saw cooler and drier than normal conditions across the Northern Indiana HSA. Although it was drier than normal, the western part of the region saw above normal snowfall, thanks to a significant lake effect snow event on the 26th and 27th. Eastern parts of the area saw normal to just below normal snowfall for the month.

At the Fort Wayne airport, the average high temperature was 46 degrees. This was 3.9 degrees below the normal value of 49.9 degrees. The average low temperature was 30.2 degrees. This was 2.7 degrees below the normal value of 32.9 degrees. This resulted in an average monthly temperature of 38.1 degrees which was 3.3 degrees cooler than the normal value of 41.4 degrees. The greatest temperature was 65 on the 17th and the coolest was 14 degrees on the 24th. There was 1.46 inches of liquid precipitation reported last month. This was 1.63 inches below the normal value of 3.09 inches. The greatest 24-hour liquid precipitation was 1.70 inches from October 31st to November 1st. Of this precipitation, there was only 1 inch of snow. This was 0.8 inches below the normal value of 1.8 inches. The greatest 24-hour snowfall was 0.5 inch on the 11th. The greatest snow depth was 1 inch. This brings the seasonal total to 1 inch which is 1.1 inches below the normal value of 2.1 inches.

The average high temperature at the South Bend airport was 45.2 degrees which was 3 degrees cooler than the normal value of 48.2 degrees. The average low temperature was 31.6 degrees which was 1.7 degrees cooler than the normal of 33.3 degrees. This resulted in an average temperature for the month of 38.4 degrees. This was 2.3 degrees cooler than the normal value of 40.7 degrees. The warmest temperature was 65 degrees on the 17th and the coolest was 18 degrees on the 13th. There was 2.63 inches of liquid equivalent precipitation at South Bend during the month. This was 0.64 inches below the normal value of 3.27 inches. The greatest 24-hour total was 1.13 inches from October 31st to November 1st. Of this precipitation, 8.9 inches of snow was observed. This was 4.1 inches above the normal value of 4.8 inches. The greatest 24-hour snowfall total was 6.1 inches on the 27th. The greatest snow depth was 7 inches. This brings the seasonal total to 9.2 inches. This is 4 inches above normal.

...Rivers all remained low...

The below normal rainfall over the past couple of months has led to relatively low river levels across the area. Therefore, no flooding was reported. As temperatures began to drop during the latter part of the month, ice has begun to form on some of the streams.

...Abnormally dry conditions persist...

Abnormally dry conditions persist across all of northeast Indiana, most of southern Lower Michigan and a small part of northwest Ohio. There has been little change over the past month.

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)

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR

NOVEMBER 2013

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

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:
MONTH YEAR
DECEMBER 2013

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 17, 2014

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.

...Heavy rains and snow return to the Northern Indiana HSA...

The southeastern half of the HSA experienced heavy snows followed by heavy rain. This combination led to minor to moderate flooding across portions of the Maumee and Wabash River basins. Cold weather following the rains had led to widespread ice development over many rivers.

The average high temperature at the Fort Wayne airport was 35.1 degrees. This was 1.1 degrees below the normal value of 36.2 degrees. The average low temperature was 19.7 degrees which was 2.4 degrees below the normal value of 22.1 degrees. This resulted in an average temperature of 27.4 degrees. This was 1.7 degrees below the normal value of 29.1 degrees. The highest temperature recorded was 59 degrees on the 4th and 5th while the lowest temperature was -4 degrees on the 12th. Rainfall totals for the month were nearly average. There was 2.86 inches of liquid equivalent at the airport. This was 0.09 inches above the normal value of 2.77 inches. The greatest 24-hour rainfall total was 1.59 inches from the 21st to the 22nd. Snowfall was slightly above climatological normals for the month. There was 9.9 inches which was 1.4 inches above the normal value of 8.5 inches. This brings the seasonal total to 10.9 inches which is 0.3 inches above normal. The greatest 24-hour snowfall was 4.6 inches. The greatest snow depth was 5 inches on the 15th and 17th.

At the South Bend airport, the average high temperature was 32.9 degrees. This was 2.3 degrees below the normal value of 35.2 degrees. The average low temperature was 19.3 degrees which was 3.1 degrees below the normal value of 22.4 degrees. This resulted in an average monthly temperature of 26.1 degrees. That was 2.7 degrees below the normal value of 28.8 degrees. The warmest temperature was 59 degrees on the 4th and the lowest temperature was -3 on the 12th. There was just slightly below normal liquid equivalent precipitation. For the month, there was 2.33 inches reported at the airport. This was 0.28 inches below the normal value of 2.61 inches. The greatest 24-hour total was 0.72 inches from the 21st to the 22nd.

...Minor to moderate flooding recorded...

Snowfall amounts of a foot or more were noted across portions of northwest Ohio and northern Indiana during the middle part of the month. Just a week before Christmas, a warm occurred which led to significant snowmelt. Additionally, heavy rains fell immediately after the warm up. This caused large rises on rivers in the Maumee and Wabash River basins. The Auglaize River at Ft. Jennings crested at

16.33 feet which was 0.33 feet above moderate flood stage. The Blanchard River at Ottawa crested at 28.85 feet. This was 1.85 feet above moderate stage. Finally, the Mississinewa River at Marion rose to 14.03 feet. This was 1.03 feet above the moderate flood stage.

...Drought conditions improve...

The significant snows and heavy rain have caused a vast improvement in soil moisture conditions across the area. According to the initial Drought Monitor of 2014, there were no areas in the Northern Indiana HSA that were experiencing drought conditions.

FLOOD STAGE REPORT

REPORT FOR:
MONTH YEAR

DECEMBER 2013

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date/Time)		CREST	
		FROM	TO	STAGE (Feet)	DATE/TIME
AUGLAIZE RIVER AT FT. JENNINGS	13	12/22/2013 13:30Z/8:30 AM EST	GAUGE MALFUNCTIONED	16.33	12/23/2013 13:30Z/8:30 AM EST
AUGLAIZE RIVER AT DEFIANCE POWER DAM	21	12/23/2013 22:45Z/5:45 PM EST	12/25/2013 00:30Z (12/24/2013 7:30 PM EST)	21.61	12/24/2013 10:45Z/5:45 AM EST)
BLANCHARD RIVER AT OTTAWA	23	12/22/2013 11:30Z/6:30 AM EST	12/26/2013 03:30Z (12/25/2013 11:30 PM EST)	28.85	12/23/2013 15:00Z/10:00 AM EST
MISSISSENAWA RIVER AT MARION	12	12/22/2013 21:15Z/4:15 PM EST	12/24/2013 11:45Z/7:45 AM EST	14.03	12/23/2013 19:45Z/2:45 PM EST
SAINT MARY'S RIVER AT DECATUR (This site malfunctioned so the rise time to flood stage is an estimate.)	17	12/23/2013 01:00Z (12/22/2013 8:00 PM EST)	12/28/2013 5:00Z/1:00 AM EST)	18.68	12/26/2013 8:15Z/3:15 AM EST)
SALAMONIE RIVER BELOW WARREN	12	12/22/2013 11:45Z/6:45 AM EST):	GAUGE MALFUNCTIONED	12.78	12/23/2013 04:45Z (12/23/2013 11:45 PM EST)
TIFFIN RIVER AT STRYKER	11	12/22/2013 15:30Z/10:30 AM EST	12/24/2013 11:45Z/6:45 AM EST	11.95	12/25/2013 04:30Z (12/24/2013 11:30 PM EST)
WABASH RIVER AT BLUFFTON (Due to inconsistent readings, the date and time the river fell below flood stage is estimated)	10	12/22/2013 14:00Z/9:00 AM EST	12/26/2013 5:00Z/1:00 AM EST	12.98	12/24/2013 15:35Z/10:35 AM EST
WABASH RIVER AT LINN GROVE	11	12/23/2013 07:30Z/2:30 AM EST	GAUGE MALFUNCTIONED	12.72	12/24/2013 01:00Z (12/23/2013 8:00 PM EST)
WABASH RIVER NEAR BLUFFTON	12	12/23/2013 20:00Z/3:00 PM EST	12/26/2013 5:15Z/1:15 AM EST	14.24	12/24/2013 17:00Z/12:00 PM EST