

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

TO: HYDROMETEOROLOGICAL INFO CENTER (W/OS31)
SSMC 2 – Rm. 13468
1325 EAST – WEST Highway
SILVER SPRING, MD 20910 –3283

SIGNATURE:
Michael Sabones, MIC
Greg Lamberty, Service Hydrologist

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

An **X** inside this box indicates that no flooding occurred within this Hydrologic Service Area.

General Overview: January 2007 was warmer and wetter than normal across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. Precipitation averaged 1.46 inches above normal. Temperatures averaged 5.9 °F above normal. (Only NWS Fort Wayne and South Bend data were used).

For the month of January 2007, the average high temperature was in the middle 30s, the average low temperature was in the lower 20s giving an average temperature in the upper 20s. (Only NWS Fort Wayne and South Bend data were used).

There were three significant precipitation events in January 2007.

The most significant event occurred from January 12th through January 16th. An average of 2.10 inches of rain (COOP Data) fell across the area. This rainfall plus the rains that fell around New Year's Day and from January 4th through January 6th, led to significant flooding on rivers and stream in Northern Indiana and Northwest Ohio. Flooding occurred along the Maumee, St. Marys, St. Joseph Ohio, Tiffin, Blanchard, Auglaize, Eel, Wabash, Salamonie, Little, Tippecanoe and the Kankakee Rivers. The Fish and Bean Creek also had flooding. The flooding began on the 13th on the St. Marys River with flooding on the rest of the rivers and streams beginning on the 15th. All flooding was minor except along the St. Marys and the Blanchard where it reached moderate levels. The flood threat was taken care of with the issuance of river Flood Warnings (FLWs) and Flood Statements (FLSs) and with Flood Watches (FFAs) as well. A Flood Watch was issued for the Tippecanoe River downstream of Norway Dam when the flow from that structure reached 9,000 cfs. The flood event finally ended across the entire area January 22nd.

The second most significant event occurred from January 4th through January 6th when 1.04 inches of rain fell across the area (COOP Data). This rainfall extended the flooding that was going on from rains that fell around New Years Day. The flooding was occurring along the St. Marys, Tiffin and St. Joseph Ohio Rivers. New flooding developed along the

Blanchard and the Auglaize Rivers in Northwest Ohio and along the Kankakee and upper Wabash Rivers in Northern Indiana. The Bean Creek in Northwest Ohio and the Fish Creek in Northeast Indiana also rose above flood stage. Flooding also occurred along the Maumee River in Northwest Ohio. Flood Warnings (FLWs) and follow-up Flood Statements (FLSs) were issued to cover the river flood threat. Two Urban and Small Streams Flood Statements (FLSs) were issued to cover areal minor flooding for parts of Northwest Ohio and Northeast Indiana. All of the flooding associated with this event was minor in nature.

The third most significant event occurred from December 31st 2006 through January 2nd 2007. This storm produced an average of 0.83 inches of rain (COOP Data). This led to flooding of some rivers in Northern Indiana and Northwest Ohio. The following rivers flooded: The Bean Creek in Northwest Ohio, the St. Marys River, and The Fish Creek in Northeast Indiana, The St. Joseph River in Northwest Ohio and Northeast Indiana and The Tiffin River in Northwest Ohio. All of the flooding associated with this event was minor in nature. Flood Warnings (FLWs) and Flood Statements (FLSs) were issued to cover the flood threat.

Soil Moisture and River Levels: Soil moisture dried a little by the end of January with most of the heavy rain falling in the first half of the month. However soil moisture still remained very wet. The Palmer Drought Severity Index calculated for data through February 3, 2007 indicate this. The numbers are as follows: Northwest Indiana (+3.82, Very Moist Spell), North-Central Indiana (+4.01 Extremely Moist Spell), Northeast Indiana (+3.47, Very Moist Spell), Southwest Lower Michigan (+4.30, Extremely Moist Spell), South-Central Lower Michigan (+3.94, Very Moist Spell), Southeast Lower Michigan (+5.05, Extremely Moist Spell) and Northwest Ohio (+4.22, Extremely Moist Spell).

As of February 6, 2007 Northern Indiana, Northwest Ohio and Southern Michigan rivers had flows lessening from those in early January with half of the gauges reporting flows in the 25-74 percentile range and half in the 75-89 percentile range. Scott on the Pigeon R had flows in the greater than 90 percentile range. The Kankakee, The St. Joseph Michigan, The St. Joseph Ohio, The Pigeon, The Maumee and the Tippecanoe Rivers had ice jams on them by early February, but with river levels declining from the mid January flooding has been prevented so far.

Gauge data is provided by the United States Geological Survey (USGS).

Temperature: At Fort Wayne, the average high temperature in January 2007 was 35.8 °F and the average low temperature was 23.8 °F. This gave an average temperature of 29.8 °F which was 6.2 °F above normal. At Fort Wayne, the warmest temperature reached in January 2007 was 53 °F on the 4th and on the 5th. The coldest temperature reached was 1 °F on the 31st. January 2007 was the 18th warmest on record at Fort Wayne.

At South Bend, the average high temperature was 34.4 °F and the average low temperature was 23.6°F giving an average temperature of 29.0°F which was 5.6 °F above normal for

January. The warmest temperature occurred on the 12th (51 °F) and the coldest temperature occurred on the 31st (0 °F). January 2007 was the 12th warmest at South Bend.

Precipitation: Precipitation was above normal at both South Bend and Fort Wayne in January 2007. At Fort Wayne, 3.74 inches of precipitation fell, 1.69 inches above normal. Snowfall totaled 8.7 inches in January 2007, 1.2 inches below normal. At South Bend, 3.50 inches of precipitation fell, 1.23 inches above normal. The snowfall total for South Bend this January 2007 was 25.3 inches, 2.1 inches above normal. January 2007 was the 12th wettest at South Bend and 17th wettest at Fort Wayne.

Weather: January 2007 over the Western Lower Great Lakes Region began with temperatures well above normal. High temperatures on New Years Day reached the mid 40s. A significant rain event began on the 31st of December 2006 and continued through the 1st. Rainfall amounts averaged around 0.80 inches (COOP Data). Flooding resulted from the rainfall, all of it in the minor category. The flooding is covered in the General Overview Section. A zonal flow weather pattern dominated the weather across the United States which led to periodic rain events. This pattern is characterized by strong westerly upper level winds blowing across the northern part of the United States. This pattern keeps Arctic air bottled up in Canada and Russia which allows warmer air to encroach northward into the Western Lower Great Lakes Region. As a result, storm systems periodically move across the area bringing bouts of rain to the Western Lower Great Lakes and Lower Ohio Valley regions.

The second rain event began on the 4th and ended on the 6th of January producing an average of around one inch of rain (COOP Data). Temperatures from the 1st through the 6th remained well above normal with high temperatures reaching the lower 50s by the 5th before falling back into mid 30s by the 7th. This event extended the flooding that began on the 31st of December/1st of January. High temperatures remained in the 30s through the 10th finally below freezing on that date.

A warming trend began immediately after reaching the lower 50s by the 12th. The most significant rain event of the month followed this warm up with rain beginning on the 12th and continuing through the 16th. An average of just over 2 inches fell across the region (COOP Data). The rivers were already high, so more flooding of rivers and streams occurred across the Western Lower Great Lakes Region. Flooding is covered in the Overview Section of this report. Enough cold air followed this system and turned some of the rain into freezing rain across Extreme Southern Lower Michigan and far Northern Indiana. High temperatures fell below freezing again on the 16th as the weather pattern slowly changed. The zonal flow of the previous 2 weeks was replaced with a ridge of high pressure over Western North America and a trof of low pressure over the eastern two thirds of the U.S. This pattern allowed cold air masses to push southeast across the eastern half of the country. The first in a series of cold air masses crossed the relatively warmer waters of Lake Michigan producing lake effect snow where South Bend picked up nearly 4 inches by the 16th. Other areas closer to Lake Michigan received as much as 8 inches of snow.

High temperatures continued falling dropping into a range from the 20s to the lower 30s from the 16th to the 25th. The next system moved through the area from the northwest from the 20th to the 22nd with liquid amounts averaging less than a tenth of an inch liquid (COOP Data). An average of 1.9 inches of snow fell with this system (COOP Data).

The next system moved across the area from the 24th to the 26th producing very light snowfall with liquid amounts averaging just a couple of hundredths of an inch (COOP Data). The snow was very fluffy averaging around one inch (COOP Data). This system brought some warmer air back to the region allowing high temperatures to reach 40 °F. From the 1st through the 27th, temperatures averaged 8.5 °F above normal.

Then a series of systems moved across the area from the 27th through the end of January with most of the snow being produced from lake effect snow. An average of 3.6 inches of snow fell during this time period as high temperatures fell back below freezing (COOP Data), falling into the upper teens on the 31st. The coldest day of the month was the last with the low temperatures reaching the zero mark at South Bend and just 1 above at Fort Wayne. A significant lake effect snow fell from the 27th through the 29th with area near Lake Michigan in far Southwest Lower Michigan receiving as much as 20 inches of snow. Amounts rapidly dropped to around one inch over the northwest three quarters of Northern Indiana and Extreme Southern Lower Michigan.

With all of that cold air in place the snow pack accumulated to an average of 4 inches by the end of January with much higher amounts found over far Southwest Lower Michigan and Northwest Indiana. From the 28th through the 31st, temperatures averaged 9.0°F below normal.

For January 2007, Daily River and Lake Summaries (RVDs) and the Daily Hydrologic Summaries (RVAs) were issued as usual to disseminate river and precipitation information and daily and updated river forecasts. Six Hydrologic Outlooks (ESFs) were issued to disseminate probabilistic forecast numbers associated with the Advanced Hydrologic Prediction Service (AHPS) for the Maumee, St. Joseph (Michigan), the Kankakee and the Upper Wabash River Basins and four Hydrologic Outlooks (ESFs) were issued to cover flood threats in January 2007. Seventeen Flood Watch Statements (FFAs) were issued in January 2007 to cover areal and river flood threats. Sixty-seven Hydrologic Statements (RVSs) were issued to disseminate river forecasts. Four Flood Statements (FLSs) were issued to cover urban and small stream flood threats in parts of Northern Indiana and Northwest Ohio. Twenty-eight Flood Warnings (FLWs) were issued for river flooding in Northwest Ohio and Northern Indiana and one areal Flood Warning (FLW) was issued. Fifty-one Flood Statements (FLSs) were issued to update Flood Warnings. No Flash Flood Warnings (FFWs) or Flash Flood Statements (FFSs) were issued in January 2007.

All temperature data used is from NWS Fort Wayne and South Bend data only. All precipitation data used are from COOP Weather Observers and from NWS Fort Wayne and South Bend.

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
January 1 - January 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Bean Creek...				
Powers OH	15.0	1/01/07 - 1/01/07	15.87	1/01/2007 6:15AM
Powers OH	15.0	1/06/07 - 1/06/07	15.74	1/06/2007 2:15AM
Powers OH	15.0	1/15/07- 1/16/07	16.15	1/15/2007 3:00PM
St. Marys River...				
Decatur IN	17.0	1/01/07 - 1/02/07	18.09	1/01/2007 5:00PM
Decatur IN	17.0	1/06/07 - 1/10/07	18.96	1/07/2007 1:45PM
Decatur IN	17.0	1/13/07 - 1/19/07	20.96	1/16/2007 4:15PM
Muldoon Bridge IN	14.0	1/15/07 - 1/18/07	14.62	1/17/2007 2:30AM
Maumee River...				
Fort Wayne IN	17.0	1/15/07 - 1/18/07	18.71	1/16/2007 1:00PM
Coliseum (Ft. Wayne) IN	17.0	1/15/07 - 1/19/07	19.47	1/16/2007 1:30PM
New Haven IN	17.0	1/15/07 - 1/18/07	19.14	1/16/2007 1:00PM

All Times in Eastern Standard and all measurements in feet

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
January 1 - January 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Maumee River... Defiance OH	10.0	1/06/07 - 1/08/07	10.62	1/07/2007 7:15PM
Defiance OH	10.0	1/15/07 - 1/18/07	12.66	1/16/2007 6:15PM
Napoleon OH	12.0	1/16/07 - 1/17/07	12.69	1/16/2007 9:30PM
Fish Creek... Artic IN	9.0	1/02/07 - 1/02/07	9.18	1/02/2007 11:15AM
Artic IN	9.0	1/06/07 - 1/07/07	9.23	1/06/2007 4:45PM
Artic IN	9.0	1/15/07 - 1/17/07	9.71	1/16/2007 3:45PM
St. Joseph River (Ohio)... Montpelier OH	12.0	1/07/07 - 1/07/07	12.13	1/07/2007 7:00AM
Montpelier OH	12.0	1/16/07 - 1/17/07	12.35	1/17/2007 7:00AM
Newville IN	12.0	1/02/07 - 1/11/07	13.20	1/07/2007 12:00AM
Newville IN	12.0	1/15/07 - 1/20/07	12.97	1/18/2007 9:00AM

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January 1 - January 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
St. Joseph River (Ohio)... St. Joseph IN (Ft. Wayne)	12.0	1/15/07 - 1/16/07	12.47	1/16/2007 11:30PM
Auglaize River... Ft. Jennings OH	13.0	1/06/07 - 1/08/07	14.18	1/07/2007 5:00AM
Ft. Jennings OH	13.0	1/15/07 - 1/17/07	14.57	1/15/2007 7:00PM
Blanchard River... Ottawa OH	23.0	1/06/07 - 1/09/07	27.09	1/07/2007 3:00PM
Ottawa OH	23.0	1/15/07 - 1/18/07	25.80	1/16/2007 8:00AM
Tiffin River... Stryker OH	11.0	12/31/06 - 1/11/07	13.30	1/08/2007 12:00AM
Tiffin River... Stryker OH	11.0	1/15/07 - 1/20/07	13.25	1/17/2007 3:00PM
Kankakee River... Davis IN	10.0	1/05/07 - 1/11/07	11.25	1/06/2007 10:15AM
Davis IN	10.0	1/14/07 - 1/22/07	11.36	1/16/2007 4:00PM
Wabash River... Linn Grove IN	11.0	1/07/07 - 1/08/07	11.83	1/07/2007 6:00PM

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DATE (MONTH & YEAR):
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RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Wabash River... Linn Grove IN	11.0	1/15/07 - 1/18/07	12.42	1/16/2007 4:00PM
Bluffton DCP IN	12.0	1/15/07 - 1/18/07	14.08	1/17/2007 2:15AM
Bluffton IN	10.0	1/07/06 - 1/09/06	11.40	1/07/2007 8:00AM
Bluffton IN	10.0	1/14/07 - 1/19/07	13.10	1/17/2007 8:00AM
Wabash IN	14.0	1/15/07 - 1/15/07	15.39	1/15/2007 11:00AM
Eel River... North Manchester IN	9.0	1/15/07 - 1/16/07	10.28	1/15/2007 2:30PM
Little River... Huntington IN	15.0	1/15/07 - 1/16/07	15.10	1/16/2007 1:45AM
Salamonie River... Warren IN	12.0	1/15/07 - 1/16/07	12.80	1/16/2007 12:00AM
Tippecanoe River... Oswego IN	7.5	1/15/07 - 1/19/07	7.77	1/19/2007 8:00AM

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DATE (MONTH & YEAR):

January 1 - January 31, 2007

RIVER STATION	FLOOD	ABOVE	CREST	
	STAGE	FLOOD STAGE	STAGE	DATE/TIME
Ora IN	12.0	1/15/07 - 1/20/07	13.15	1/17/2007 5:45PM
Winamac (DCP) IN	10.0	1/17/07 - 1/20/07	11.03	1/18/2007 12:15AM

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

An X inside this box indicates that no flooding occurred within this Hydrologic Service Area.

General Overview: February 2007 was much colder and drier than normal across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. Precipitation averaged 0.76 inches below normal. Temperatures averaged 10.4 °F below normal. (Only NWS Fort Wayne and South Bend data were used).

For the month of February 2007, the average high temperature was in the middle 20s, the average low temperature was in the high single digits to 10 °F giving an average temperature in the mid to upper teens. (Only NWS Fort Wayne and South Bend data were used).

There were two significant precipitation events in February 2007...none led to flooding in February.

The most significant event occurred from February 12th through February 14th. An average of 0.53 water equivalent of snow fell across the area (COOP Data). Snowfall amounts averaged around 9.7 inches (COOP Data). Blizzard warnings were issued for the southern half of the Hydrologic Service Area on the 13th of the month. Snowfall amounts ranged from 17 inches in Logansport Indiana to 15 inches in Hartford City Indiana to 6.4 inches in Three Rivers Michigan to 9.4 inches in Hicksville Ohio to 3 inches in Wauseon Ohio. Strong east to northeast winds blew the snow into 2 to 4 foot drifts. Temperatures were well below freezing with highs on the 14th reaching only in the teens.

The second most significant event occurred from February 24th through February 26th when 0.55 inches of rain and snow fell across the area (COOP Data). Snowfall totals averaged only 0.3 inches (COOP Data). Most of the rain was absorbed into the snowpack, greatly reducing runoff into rivers and streams. As a result flooding was delayed into early March, 2007. A Flood Warning (FLW) was issued on February 27th for Davis on the Kankakee River, but the flooding was not expected to begin until early March.

Soil Moisture and River Levels: Soil moisture increased slightly due to snowmelt over the last week of February. Soils remained exceptionally moist into early March. The Palmer Drought Severity Index calculated for data through March 4, 2007 indicate this. The numbers are as follows: Northwest Indiana (+4.02, Extremely Moist Spell), North-Central Indiana (+4.11 Extremely Moist Spell), Northeast Indiana (+3.35, Very Moist Spell), Southwest Lower Michigan (+4.35, Extremely Moist Spell), South-Central Lower Michigan (+3.99, Very Moist Spell), Southeast Lower Michigan (+5.07, Extremely Moist Spell) and Northwest Ohio (+4.32, Extremely Moist Spell).

As of March 7, 2007 most of the rivers had receded back into the 25 to 74 percentile range. However, the St. Marys River in Northeast Indiana and Northwest Ohio had flows in the greater than 90 percentile range. Higher flows could also be found along the Wabash and the Kankakee River Basins with the range in the 25 to 89 percentile range. There was an ice jam along the Tippecanoe River near the town of Buffalo in White County Indiana on February 26, 2007. There also was an ice jam on the Kankakee River on February 6th, 2007. No flooding was reported with this ice jam.

Gauge data is provided by the United States Geological Survey (USGS).

Temperature: At Fort Wayne, the average high temperature in February 2007 was 24.2 °F and the average low temperature was 8.0 °F. This gave an average temperature of 16.1 °F which was 11.2 °F below normal. At Fort Wayne, the warmest temperature reached in February 2007 was 41 °F on the 25th, the 20th and the 19th. The coldest temperature reached was -8 °F on 15th and 16th. Several cold weather records were broken at Fort Wayne Indiana in February 2007. Records for the coldest high temperatures were set on the 5th (4 °F), the 6th (8 °F), the 7th (12 °F), and the 16th (11 °F). Records for the coldest low temperatures were set on the 14th (-6 °F), the 15th (-8 °F) and the 16th (-8 °F). February 2007 was the 3rd coldest February on record at Fort Wayne.

At South Bend, the average high temperature was 24.6 °F and the average low temperature was 10.9 °F giving an average temperature of 17.8 °F which was 9.5 °F below normal for February. The warmest temperature occurred on the 19th (43 °F) and the coldest temperature occurred on the 5th (-8 °F). Several cold weather records were set at South Bend Indiana in February 2007. Records for the coldest high temperatures were set on 4th (3 °F) and on the 5th (4 °F). Records for the coldest low temperatures were set on the 5th (-8 °F), and on the 16th (-7 °F). February 2007 was the 3rd coldest on record at South Bend.

Precipitation: Precipitation was below normal at both South Bend and Fort Wayne in February 2007. At Fort Wayne, only 0.96 inches of precipitation fell, 0.98 inches below normal. Snowfall totaled 11.5 inches in February 2007, 3.9 inches above normal. At South Bend, 1.38 inches of precipitation fell, 0.6 inches below normal. The snowfall total for South Bend this February 2007 was 17.6 inches, 2.1 inches above normal. Snowfall records were set on February 13th at both Fort Wayne (6.8 inches) and South Bend (5.9 inches).

Weather: February 2007 began with high temperatures in the mid 20s and lows in the

teens. Light snow fell across the area with only an average of 0.2 inches of snowfall across the area (COOP Data). The first of several very cold Arctic air masses began to invade the Great Lakes and the Lower Ohio valley on the 2nd as the shift in weather patterns intensified. High temperatures fell into the teens by the 3rd and into the single digits by the 4th. Low temperatures fell below zero on the 4th. Light snows fell across the area, primarily near the Great Lakes. A weak weather disturbance moved through the area on the 4th and 5th bringing very light snows to the region. Amounts were less than an inch in most cases. By the 6th warmer air began moving toward the area from the south.

Temperatures rose slowly on the 6th reaching the lower to mid teens by the 7th. The warmer air brought with it snow. An average of 2.3 inches fell across the Western Lower Great Lakes on the 7th (COOP Data). Another reinforcing shot of cold Arctic air kept highs in the teens through the 9th. Light snow continued near Lake Michigan and flurries fell elsewhere. Amounts were less than an inch in all locations.

A more significant warm up began on the 11th with high temperatures breaking out into the 20s. Highs reached the lower 30s by the 12th, but a very strong storm system developing over the Southern Plains spread heavy snow and strong east to northeast winds across the area. Snowfall amounts ranged from 3 inches at Wauseon Ohio to 17 inches in Logansport. The heaviest snow band occurred along and just north of the Wabash River. Amounts ranged from 10 to 17 inches across that area. A secondary maximum developed over the far Northern Indiana with amounts as high as 11.6 inches in southern Elkhart County in North-Central Indiana.

Cold air quickly returned to the area following the snowstorm/blizzard. Low temperatures plunged below zero across much of the area with lows reaching only the single digits near the Great Lakes. Record cold low temperatures occurred at Fort Wayne on the 14th, 15th and the 16th with a record cold high temperature occurring on the 16th. A record cold low temperature occurred at South Bend on the 16th. This was the last of the very cold air outbreaks. The weather pattern began changing by the 18th to a more zonal flow which banked the very cold air in Canada and allowed warmer air masses from the Pacific to move across the region from the west. Temperatures rose above freezing by the 19th reaching the lower 40s. From the 1st to the 18th, temperatures averaged 16 °F below normal.

The snow began to melt as high temperatures remained in the lower 40s on the 20th and in the upper 30s to lower 40s by the 21st. The snow depth decreased from 12 inches on the 19th to 5 inches on the 21st. There was little runoff as the remaining snow pack absorbed much of the melt water. Colder air filtered into the area on the 22nd causing high temperatures to fall into the upper 20s to lower 30s by the 23rd. The colder air moved out to the northeast as a storm system developed over the Central Plains. This storm remained well to our west. A warm front tried to cross the Western Lower Great Lakes Region on the 24th, but the warmest air remained to our south. Rain showers brought just over a half inch of precipitation, mostly rain to the area late on the 24th through the morning of the 26th (COOP Data). Most of the rain was absorbed into the snowpack. As a result no flooding occurred with this storm system. The cold front caught up with the warm front forming an

occlusion across the area. This produced about 0.3 inches of snow across the area (COOP Data). Even with this strong system, cold air was banked up in Canada which prevented it from coming down into the United States. High temperatures held in the lower to mid 30s from the 26th through the 28th after rising into the upper 30s to lower 40s on the 25th. From the 19th through the 28th, temperatures averaged 0.1 °F above normal. The threat of flooding due to snow melt increased during the second half of February. Fourteen Hydrologic Outlooks (ESFs) were issued from February 20th to the end of the month alerting the public to the possibility of flooding due to snowmelt and the possibility of heavy rain. The first of the Hydrologic Outlooks in support of the national Spring Flood and Water Resources Outlook was issued on the 26th. Snowpack was reduced to 2 inches on average across the entire area as February 2007 ended (COOP Data).

For February 2007, Daily River and Lake Summaries (RVDs) and the Daily Hydrologic Summaries (RVAs) were issued as usual to disseminate river and precipitation information and daily and updated river forecasts. Five Hydrologic Outlooks (ESFs) were issued to disseminate probabilistic forecast numbers associated with the Advanced Hydrologic Prediction Service (AHPS) for the Maumee, St. Joseph (Michigan), the Kankakee and the Upper Wabash River Basins and fourteen Hydrologic Outlooks (ESFs) were issued to cover flood threats in February 2007. Two Flood Watch Statements (FFAs) were issued in February 2007 to cover areal flood threats. Twenty-three Hydrologic Statements (RVSs) were issued to disseminate river forecasts. One Flood Statements (FLS) was issued to update a Flood Warning for the Kankakee River in Northwest Indiana. One Flood Warning (FLW) was issued for a forecast river flood along the Kankakee River in Northwest Indiana for early March 2007 flooding.

All temperature data used is from NWS Fort Wayne and South Bend data only. All precipitation data used are from COOP Weather Observers and from NWS Fort Wayne and South Bend.

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An **X** inside this box indicates that no flooding occurred within this Hydrologic Service Area.

General Overview: March 2007 had warmer temperatures and near normal precipitation across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. Precipitation averaged 0.08 inches above normal. Temperatures averaged 4.9 °F above normal. (Only NWS Fort Wayne and South Bend data were used).

For the month of March 2007, the average high temperature was in the lower 50s and the average low temperature was in the lower 30s giving an average temperature in lower 40s. (Only NWS Fort Wayne and South Bend data were used).

There were three significant precipitation events in March 2007, all led to flooding of some rivers in Northern Indiana and Northwest Ohio.

The most significant event occurred from March 18th through March 24th. An average of around 1.50 inches of rain fell across the area (COOP Data). Only a trace of snow fell with this event. The rainfall led to the issuance of Flood Warnings (FLWs) for the Tippecanoe, St. Marys, Kankakee, Salamonie, Mississinewa and the Wabash Rivers in Northern Indiana and Northwest Ohio. All of the flooding was in the minor category. Areal Flood Advisories (FLSs) were issued to cover flooding across parts of Northern Indiana and Northwest Ohio during this event.

The second most significant event occurred from March 1st through March 4th. An average of around a half inch of precipitation fell across the area (COOP Data). About one inch of snow fell also. The warmer weather that occurred along with the rainfall caused flooding along the Kankakee, Wabash, St. Marys, Tiffin, Auglaize and Blanchard Rivers in Northeast Indiana and Northwest Ohio. All of the flooding was in the minor category. Flood Warnings (FLWs) and Flood Statements (FLSs) were issued to cover the flooding. Areal Flood Advisories (FLSs) were issued for parts of Northwest Ohio as the rain fell on frozen soils and melted snow. An ice jam flood occurred along the Salamonie River on March 1st 2007 as warm temperatures and rainfall caused river ice to break up on the

Salamonie River. This causes ice jamming along the Salamonie River downstream of Warren Indiana. A Flash Flood Warning (FFW) and a Flash Flood Statements (FFS) were issued to cover this event. There was no damage reported with the flooding. The river crested at 12.97 feet at the Warren gauge with level quickly falling below the 12 foot flood stage after being above flood stage for just 2 hours. Ice jamming also caused flooding along the Maumee River at Napoleon and at Defiance on March 3rd. The flooding at Napoleon lasted only about 4 hours while that at Defiance lasted 34 hours. The Defiance Ohio crest, however remained in the minor category.

The third most significant precipitation event occurred from March 13th through March 15th. An average of around a half inch of rain fell across the area during this time period (COOP Data). Just over a half inch of snow occurred in this event (COOP Data). This rainfall combined with the melting of all the remaining snow produced flooding along the Kankakee, Maumee, Auglaize, Tiffin, St. Joseph (Ohio), Wabash and Salamonie Rivers in Northern Indiana and Northwest Ohio. Flooding was minor over all locations except upstream of Bluffton on the Wabash River where there was some minor flooding. Again no damage was reported with the flooding.

Soil Moisture and River Levels: Soil moisture remained high across the area in March as measured by the Palmer Drought Severity Index. The numbers calculated for data through March 31st are as follows: Northwest Indiana (+3.61, Very Moist Spell), North-Central Indiana (+3.70, Very Moist Spell), Northeast Indiana (+3.02, Very Moist Spell), Southwest Lower Michigan (+3.93, Very Moist Spell), South-Central Lower Michigan (+3.17, Very Moist Spell), Southeast Lower Michigan (+4.24, Extremely Moist Spell) and Northwest Ohio (+3.58, Very Moist Spell).

As of April 5, 2007 area rivers and streams receded to the 25 to 74 percentile range with some gauges in Southern Lower Michigan and Northwest Ohio falling back into the 10 to 24 percentile range. All of the rivers and streams had thawed by early April and all of the snow had melted.

Gauge data is provided by the United States Geological Survey (USGS).

Temperature: At Fort Wayne, the average high temperature in March 2007 was 53.2 °F and the average low temperature was 32.8 °F. This gave an average temperature of 43.0 °F which was 4.9 above normal. At Fort Wayne, the warmest temperature reached in March 2007 was 79 °F on the 25th. The coldest temperature reached was 10 °F on 6th. Several warm weather records were broken at Fort Wayne Indiana in March 2007. A high temperature record was tied on the 13th when the temperature reached 73 °F. High temperatures records were broken on the 25th and 26th when the high temperature reached 79 °F and 76 °F respectively. Record high minimum temperature records were also broken on the 25th and 26th when the temperature failed to fall below 58 °F. March 2007 was the 11th warmest March on record.

At South Bend, the average high temperature was 52.1 °F and the average low temperature was 32.7 °F giving an average temperature of 42.4 °F which was 4.9 °F above normal for

March. The warmest temperature occurred on the 25th and the 26th (79 °F) and the coldest temperature occurred on the 6th and the 8th (9 °F). Several warm weather records were set at South Bend Indiana in March 2007. The record for the warmest temperature on March 13th was tied (74 °F). Records for the warmest March 25th and 26th were broken (79 °F). The record for the warmest low temperatures was also broken on March 26th (65 °F). March 2007 was the 7th warmest on record at South Bend.

Precipitation: Precipitation was below normal at South Bend and above normal at Fort Wayne in March 2007. At Fort Wayne, 3.39 inches of precipitation fell, 0.53 above normal. Snowfall totaled only 0.7 inches in March 2007, 4.0 inches below normal. At South Bend, 2.44 inches of precipitation fell, 0.45 below normal. The snowfall total for South Bend this March 2007 was 9.5 inches, 0.8 inches above normal. March 2007 was the 6th least snowy at Fort Wayne.

Weather: March 2007 began with temperatures above normal as high temperatures reached the mid to upper 40s. Rain showers fell across the area on the 1st before changing to snow on the 2nd. Just over 4 inches of snow fell at South Bend on the 2nd. The rains and warmer temperature served to melt more of the snowpack causing flooding on rivers in Northeast Indiana and Northwest Ohio. Details on the flooding are covered in the Overview section of this report. A cold front passed across the area on the 2nd dropping high temperatures back into the mid 30s on the 2nd. Cold air continued to pour across the Western Lower Great Lakes dropping high temperatures further into the upper 20s to lower 30s on the 3rd. Snow showers fell across the area on the 3rd and 4th with amounts reaching over 2 inches across South Central Lower Michigan and North Central Indiana. High temperatures remained in the lower 30s before another shot of cold air crossed the region dropping high temperatures back into the lower to mid 20s on the 6th. All rivers were back in their banks by the 7th.

The 6th of March was coldest day of the month with lows reaching the low teens to the single digits over South Central Lower Michigan. The weather pattern began to change allowing warmer air to build over the region. High temperatures began rising reaching the mid to upper 30s by the 8th as a warm front approached. More light snow fell across South Central and Southeast Lower Michigan, far Northern Indiana and far Northwest Ohio with amounts reaching 3 inches across extreme Northeast Indiana and extreme Northwest Ohio. Once the front passed north of the area, which was on the 9th, high temperatures were propelled into the 50s. The remaining snow pack melted in this warm air causing rivers to rise. A weak cold front pushed across the area from the northwest on the 10th stalling the rise in temperatures. High temperatures stalled in the upper 40s to the lower 50s.

The front moved back as a warm front on the 12th, this time with much warmer air behind it. High temperatures shot into the lower 70s on the 13th. Another cold front crossed the area on the 14th and 15th producing showers and thunderstorms with the heaviest rain falling across Northwest Ohio and Northeast Indiana. Van Wert Ohio received 1.10 inches of rain (COOP Data) in this event. The rains were enough to cause renewed flooding along rivers in Northern Indiana and Northwest Ohio. Flooding is covered in the Overview Section of this report. High temperatures fell back into the upper 30s to the lower 40s by

the 16th.

High temperatures remained in the 40s on the 18th as the front hovered across the area. By the 24th the front moved north as a warm front allowing very warm air to overspread the region raising high temperatures back into the lower 70s. The front did not get far enough north, however, to keep rain showers out of the area. An average of 1.5 inches of rain fell across much of the area from the 23rd to the 25th. The heavy rains caused renewed flooding on rivers in parts of Northern Indiana and Northwest Ohio. Flooding is covered in the Overview section of this report. High temperatures fell back into the upper 40s to around 50 by the 23rd. There was little cold air behind this system and as soon as it passed east of the area, warm air quickly returned driving high temperatures into the upper 70s by the 25th. Highs remained in the 70s through the 27th when another weak cold front passed across the area dropping highs back into the lower 60s by the 28th. Showers accompanied the frontal passage producing around a third of an inch of rain. No flooding occurred with this event as vegetation began to wake up and grow. Also the ground completely thawed out with the very mild conditions of the past week. This also reduced the chance of any flooding. Again like the previous cold front, little cold air followed behind it. As a result temperatures rebounded with high temperatures reaching the lower 70s by the 30th. The month ended with highs falling back into the upper 50s and light rain falling. All of the snow pack had melted by the end of March 2007.

For March 2007, Daily River and Lake Summaries (RVDs) and the Daily Hydrologic Summaries (RVAs) were issued as usual to disseminate river and precipitation information and daily and updated river forecasts. Two Hydrologic Outlooks (ESFs) were issued to disseminate probabilistic forecast numbers associated with the Advanced Hydrologic Prediction Service (AHPS) for the Maumee, St. Joseph (Michigan), the Kankakee and the Upper Wabash River Basins which were included in the Spring Snowmelt and Flood Outlook. Ten Hydrologic Outlooks were issued to cover potential local and river flooding due to heavy rain and snow melt in March 2007. Three Flood Watch Statements (FFAs) were issued in March 2007 to cover areal flood threats and Ten Flood Watch Statements were issued to cover potential river flooding along the Tippecanoe River. Fifty-two Hydrologic Statements (RVSs) were issued to disseminate river forecasts. Fifty Flood Statements (FLSs) were issued to update Flood Warnings (FLWs). Eighteen Flood Warnings (FLWs) were issued to cover flooding along the Kankakee, St. Marys, St. Joseph (Ohio), Maumee, Blanchard, Auglaize, Salamonie, Mississinewa and the Tiffin Rivers in Northern Indiana and Northwest Ohio. One Flash Flood Warning (FFW) and one Flash Flood Statement (FFS) were issued to cover ice jam flooding on the Salamonie River in Northeast Indiana.

All temperature data used is from NWS Fort Wayne and South Bend data only. All precipitation data used are from COOP Weather Observers and from NWS Fort Wayne and South Bend.

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
March 1 - March 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Maumee River... Defiance OH	10.0	3/03/07 - 3/04/07	11.38	3/03/2007 4:15PM
Napoleon OH	12.0	3/03/07 - 3/03/07	12.41	3/03/2007 3:45AM
Fish Creek... Artic IN	9.0	3/03/07 - 3/03/07	9.04	3/03/2007 12:30PM
St. Joseph River (Ohio)... Newville IN	12.0	3/15/07 - 3/16/07	12.14	3/15/2007 3:00PM
Auglaize River... Ft. Jennings OH	13.0	3/02/07 - 3/04/07	14.89	3/03/2007 7:00AM
Ft. Jennings OH	13.0	3/16/07 - 3/18/07	14.58	3/16/2007 5:00PM
Blanchard River... Ottawa OH	23.0	3/02/07 - 3/04/07	24.45	3/07/2007 9:00AM
Tiffin River... Stryker OH	11.0	3/03/07 - 3/06/07	11.64	3/05/2007 8:30AM
Stryker OH	11.0	3/11/07 - 3/18/07	12.06	3/15/2007 6:30PM
St. Marys River... Decatur IN	17.0	3/02/07 - 3/07/07	19.18	3/03/2007 4:30PM

All Times in Eastern Standard and all measurements in feet

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
March 1 - March 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Decatur IN	17.0	3/15/07 - 3/19/07	18.22	3/18/2007 10:45AM
Decatur IN	17.0	3/23/07 - 3/26/07	18.60	3/26/2007 6:30PM
Kankakee River... Davis IN	10.0	3/02/07 - 3/04/07	10.24	3/03/2007 5:15AM
Davis IN	10.0	3/10/07 - 3/17/07	10.48	3/14/2007 10:30AM
Davis IN	10.0	3/23/07 - 3/26/07	10.24	3/24/2007 4:00PM
Wabash River... Linn Grove IN	11.0	3/02/07 - 3/05/07	12.38	3/03/2007 1:00PM
Linn Grove IN	11.0	3/16/07 - 3/18/07	12.14	3/16/2007 6:00PM
Linn Grove IN	11.0	3/24/07 - 3/25/07	12.22	3/25/2007 5:00AM
Bluffton DCP IN	12.0	3/03/07 - 3/05/07	14.39	3/04/2007 1:00AM

All Times in Eastern Standard and all measurements in feet

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
March 1 - March 31, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Wabash River... Bluffton DCP IN	12.0	3/16/07 - 3/18/07	13.31	3/17/2007 8:30AM
Bluffton IN	10.0	3/02/07 - 3/05/07	12.75	3/04/2007 8:00AM
Bluffton IN	10.0	3/16/07 - 3/18/07	11.20	3/17/2007 7:00AM
Bluffton IN	10.0	3/24/07 - 3/27/07	12.13	3/26/2007 7:00AM
Salamonie River... Warren IN	12.0	3/01/07 - 3/01/07	12.97	3/01/2007 7:30PM
Warren IN	12.0	3/23/07 - 3/25/07	12.53	3/24/2007 10:00AM
Mississinewa River... Marion IN	12.0	3/24/07 - 3/25/07	12.36	3/24/2007 9:00PM

All Times in Eastern Standard and all measurements in feet

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

TO: HYDROMETEOROLOGICAL INFO CENTER (W/OS31)
SSMC 2 – Rm. 13468
1325 EAST – WEST Highway
SILVER SPRING, MD 20910 –3283

SIGNATURE:
Michael Sabones, MIC
Greg Lamberty, Service Hydrologist

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

An **X** inside this box indicates that no flooding occurred within this Hydrologic Service Area.

General Overview: April 2007 was slightly cooler and wetter than normal across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. Precipitation averaged 0.40 inches above normal. Temperatures averaged 1.1 °F below normal. (Only NWS Fort Wayne and South Bend data were used).

For the month of April 2007, the average high temperature was in the upper 50s and the average low temperature was in the upper 30s giving an average temperature in upper 40s. (Only NWS Fort Wayne and South Bend data were used).

There were two significant precipitation events in April 2007, only one led to flooding of several rivers in Northern Indiana and Northwest Ohio.

The most significant event occurred from April 24th through April 26th. An average of around 1.60 inches of rain fell across the area (COOP Data). The rainfall led to flooding along the Maumee, St. Joseph River (Ohio), Tippecanoe, St. Marys, Kankakee, Tiffin, Fish Creek, Bean Creek and the Blanchard Rivers in Northern Indiana and Northwest Ohio. All of the flooding was in the minor category. Flood Warnings (FLWs) and follow ups Flood Statements (FLSs) were issued for the Maumee, St. Joseph (Ohio), Tippecanoe, St. Marys, Kankakee, Tiffin and the Blanchard Rivers in Northern Indiana and Northwest Ohio. A Hydrologic Outlooks (ESFs) were also issued for the Kankakee River. Elevated rivers levels were also found along the St. Joseph River (Michigan).

The second most significant event occurred from April 9th through April 12th. An average of around 1.1 inches of precipitation fell across the area (COOP Data). About one half inch of snow fell also. The precipitation led to significant rises along rivers and streams but all remained below flood stage. Three Flood Watches (FFAs) were issued to cover the flood threat along the Kankakee River. A Flood Warning (FLW) with additional Flood Statements (FLSs) was issued for the Kankakee River when the river approached flood stage. Snow melt was also a contributing factor to elevating the flood threat.

Soil Moisture and River Levels: Soil moisture continues to be high across Northern Indiana, Northwest Ohio and Southern Lower Michigan with the heavy rains that fell near the end of the month as measured by the Palmer Drought Severity Index. The numbers calculated for data through April 28th are as follows: Northwest Indiana (+3.71, Very Moist Spell), North-Central Indiana (+3.41, Very Moist Spell), Northeast Indiana (+3.08, Very Moist Spell), Southwest Lower Michigan (+4.12, Extremely Moist Spell), South-Central Lower Michigan (+3.03, Very Moist Spell), Southeast Lower Michigan (+3.39, Very Moist Spell) and Northwest Ohio (+3.80, Very Moist Spell).

As of May 1, 2007 Rivers and streams in the Western Lower Great Lakes region continue to have elevated flows. In Northern Indiana, most river have flows in the greater than the 75 percentile. The Kankakee River at Davis Indiana has a record flow for May 1. Lower flows were along the Elkhart River with gauge readings in the 25 to 74 percentile range. Both Northwest Ohio and Southern Lower Michigan had river gauge readings in the greater than the 75 percentile

Gauge data is provided by the United States Geological Survey (USGS).

Temperature: At Fort Wayne, the average high temperature in April 2007 was 58.4 °F and the average low temperature was 37.9 °F. This gave an average temperature of 48.1 °F which was 0.9 °F below normal. At Fort Wayne, the warmest temperature reached in April 2007 was 81 °F on the 22nd. The coldest temperature reached was 20 °F on 8th.

At South Bend, the average high temperature was 57.4 °F and the average low temperature was 36.6 °F giving an average temperature of 47.0 °F which was 1.3 °F below normal for April. The warmest temperature occurred on the 22nd (82 °F) and the coldest temperature occurred on the 7th (22 °F). The record for the coolest high temperature was set on the 7th when the temperature failed to rise above 28 °F.

Precipitation: Precipitation was above normal at South Bend and below normal at Fort Wayne in April 2007. At Fort Wayne, 3.47 inches of precipitation fell, 0.07 inches above normal. Snowfall totaled 3.4 inches in April 2007, 2.3 inches above normal. At South Bend, 4.48 inches of precipitation fell, 0.86 above normal. The snowfall total for South Bend this April 2007 was 6.1 inches, 4.4 inches above normal. April 2007 was the 6th snowiest at South Bend. The record for the most precipitation on an April 25th fell at South Bend when 2.48 inches of rain fell. The record for the most snow on an April 11th was broken when 3.6 inches of snow fell. The record for the most snow on an April 14th at Fort Wayne was also broken when 1.6 inches of snow fell.

Weather: April 2007 began with temperatures well above normal with high temperatures in the mid to upper 60s and lower to mid 70s prevalent through the first 3 days of the month. Light rain showers occurred on the last day of March and the first day of April with no flooding resulting from the rain. The rain was caused by a warm front which passed through north of the area bringing a warm air mass into the region. From the 1st through the 3rd, temperatures averaged 14 °F above normal.

However a strong cold front approached from the northwest on the 4th dropping high temperatures back into the lower 40 to lower 50 degree range. Much colder Arctic air overspread the region on the 5th dropping high temperatures back into the lower to mid 30s. Around 0.2 inches of snow fell on the 4th and into the 5th of the month. This cold front was one of several to pass across the area, each bringing with it snow as the upper level weather pattern changed bringing northwest flow across the upper Midwest and Great Lakes region. Snowfall amounts were light across the area with all of it melting during the day only to be replaced with more snow at night. Freeze Watches and Freeze Warnings (NPWs) were issued from April 6th through April 17th for the area as low temperatures fell into the 20s to the 30s range every night during that time period. Warmer air tried to return to the area from the 10th through the 12th. A storm system brought an average of over one inch of precipitation to the region during that timeframe. Most of the precipitation was in the form of rain, but there was some snow that fell. River levels responded well to the precipitation with the Kankakee River near Davis Indiana coming very close to flood stage, but all of the rivers and streams crested below flood stage. Records for snowfall were broken at both Fort Wayne and South Bend during this time frame. See the temperature section of this report for more details. From the 4th through the 17th, temperatures averaged 10.3 °F below normal.

The weather pattern over the North American changed by the 17th, allowing warmer air to move into the Midwest. High temperatures rose into the upper 60s to lower 70s on the 17th. There was one final push of cold air that got into the Western Lower Great Lakes region on the 18th pushing high temperatures back down into the 50s. Scattered light rain showers accompanied the cold front producing trace amounts with no effect. Temperatures began a rise on the 19th with highs reaching into the 60s. The rising trend continued with high temperatures finally reaching the lower 80s by the 22nd. The pattern that brought the warm weather began to change allowing colder air to again overspread the area. A storm system developing over the Northern Plains brought heavy rain and thunderstorms to the region late on the 24th and into the 26th. A rainfall record for the 25th of April was set when 2.48 inches of rain fell at South Bend Regional Airport. This widespread rain event cause flooding on some rivers in Northern Indiana and Northwest Ohio. High temperatures fell back into the mid 50s by the 27th as a result of the rainfall and cooler air flowing in behind the storm system. Unlike the previous cold outbreaks, this one was short lived as high temperatures rebounded back into the 70s as April ended. From the 18th through the 30th, temperatures averaged 5.9 °F above normal. Flooding on the Kankakee, Tiffin and St. Joseph Ohio Rivers continued into early May 2007.

For April 2007, Daily River and Lake Summaries (RVDs) and the Daily Hydrologic Summaries (RVAs) were issued as usual to disseminate river and precipitation information and daily and updated river forecasts. Five Hydrologic Outlooks (ESFs) were issued to disseminate probabilistic forecast numbers associated with the Advanced Hydrologic Prediction Service (AHPS) for the Maumee, St. Joseph (Michigan), the Kankakee and the Upper Wabash River Basins. Two Hydrologic Outlooks were issued to cover potential for river flooding due to heavy rain in April 2007. Three Flood Watch Statements (FFAs) were issued in April 2007 to cover river flood threats along the Kankakee River. Thirty-

three Hydrologic Statements (RVSS) were issued to disseminate river forecasts. Seventeen Flood Statements (FLSs) were issued to update Flood Warnings (FLWs). Ten Flood Warnings (FLWs) were issued to cover flood threats along the Kankakee, St. Marys, St. Joseph (Ohio), Tippecanoe, Blanchard, Maumee and the Tiffin Rivers in Northern Indiana and Northwest Ohio. No Areal Flood Warnings (FLWs) or areal (FLSs) as well as Flash Flood Warnings or Flash Flood Statements were issued April 2007.

All temperature data used is from NWS Fort Wayne and South Bend data only. All precipitation data used are from COOP Weather Observers and from NWS Fort Wayne and South Bend.

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
April 1 - April 30, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Maumee River... Fort Wayne IN	17.0		16.28	4/27/2007 10:00PM
Coliseum Blvd Ft. Wayne	17.0	4/27/07 - 4/28/07	17.20	4/28/2007 12:00AM
Defiance OH	10.0	4/27/07 - 4/28/07	10.42	4/27/2007 10:45PM
Fish Creek... Artic IN	9.0	4/26/07 - 4/28/07	9.83	4/27/2007 11:15AM
St. Joseph River (Ohio)... Newville IN	12.0	4/26/07 - Cont.	13.06	4/29/2007 3:00AM
Montpelier OH	12.0	4/27/07 - 4/28/07	12.30	4/28/2007 6:00AM
St. Joseph Ft. Wayne IN	12.0		11.97	4/26/2007 7:30PM
Bean Creek... Powers OH	15.0	4/26/07 - 4/27/07	15.62	4/27/2007 2:30AM
Tiffin River... Stryker OH	11.0	4/26/07 - Cont.	13.36	4/28/2007 8:30AM
St. Marys River... Decatur IN	17.0	4/26/07 - 4/28/07	18.02	4/27/2007 4:00PM

All Times in Eastern Standard and all measurements in feet

FLOOD STAGE REPORT

DATE (MONTH & YEAR):
April 1 - April 30, 2007

RIVER STATION	FLOOD STAGE	ABOVE FLOOD STAGE	CREST	
			STAGE	DATE/TIME
Blanchard River... Ottawa OH	23.0		22.63	4/27/2007 10:00PM
Kankakee River... Davis IN	10.0	4/25/07 - Cont.	11.83	4/27/2007 6:15PM
Wabash River... Linn Grove IN	11.0		10.83	4/28/2007 3:45PM
Bluffton DCP IN	12.0		11.43	4/29/2007 2:45AM
Bluffton IN	10.0		9.87	4/29/2007 7:00AM
Tippecanoe River... Ora IN	12.0		11.18	4/28/2007 11:15AM

All Times in Eastern Standard and all measurements in feet

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)
		WFO IWX
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		May 2007
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Patrick Murphy, Lead Meteorologist
		DATE
		June 11, 2007

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.

Summary:

...EMERGING DROUGHT CONDITIONS IN THE WABASH AND SOUTHWEST MAUMEE RIVER BASINS...

May 2007 was warmer and much drier than normal across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. The weather pattern was largely influenced by an anomalously westward displacement of the Bermuda High with a dominant ridge extending from the Carolinas to the Maumee and Wabash river valleys. Many spring cold frontal passages that provide precipitation typical to this month were not realized because of the blocking pattern and dry atmosphere associated with this ridge. The northern half of the area received more episodes of showers and thunderstorms than the southern half, where the ridge was stronger. Consequently, streamflow conditions in the Wabash and southwestern Maumee river basins were much more negatively impacted.

At Fort Wayne, Indiana, monthly precipitation totaled just 1.10 inches, 2.56 inches below normal. The monthly average temperature was 65.0 degrees, 4.6 degrees above normal. Of particular note was that the average daily maximum temperature of 78.2 degrees was 6.6 degrees above normal. This strong diurnal temperature rise is typical of the prevailing weather pattern and also creates above normal evapotranspiration rates. May 2007 at Fort Wayne now ranks as the seventh warmest and fifth driest May on record (data from 1911 to present).

At South Bend, Indiana, the monthly precipitation was slightly higher at 1.70 inches, yet still well below normal with a deficit of 1.80 inches. The monthly average temperature was 64.6 degrees, 5.0 degrees above normal. Again, similar to Fort Wayne, the average daily maximum temperature disproportionately contributed to the above normal monthly mean temperature. The average daily maximum temperature at South Bend was 77.2 degrees, 6.5 degrees above normal. May 2007 at South Bend now ranks as the seventh warmest and twelfth driest May on record (data from 1940 to present).

Flood Conditions:

Significant rainfall occurred in late April 2007. From the 24th through the 26th, mean aerial rainfall totaled around 1.60 inches. Runoff led to minor flooding along the Maumee, St. Joseph River (Ohio), Tippecanoe, St. Marys, Kankakee, Tiffin, Fish Creek, Bean Creek and the Blanchard Rivers in Northern Indiana and Northwest Ohio.

At the start of May 2007, most area river levels had fallen below flood stage. A few points, St. Joseph River (Ohio) at Newville, IN; Tiffin River at Stryker, OH; and the Kankakee River at Davis, IN remained above flood stage, but were receding. Outside of the normally issued hydrological products, continuation and terminating statements were issued in early May for these falling limb hydrographs. The last point to fall below flood stage was the Kankakee River at Davis, which fell below its 10.0 foot flood stage on the evening of May 3rd.

Only infrequent, minor rises above base flow were observed during the remainder of the month.

River Conditions:

Owing to abnormally low rainfall and strong evaporative and seasonally strong transpirative processes, streams and rivers transitioned from high flow at the beginning of the month to near normal in the Kankakee and St. Joseph River (Michigan) river basins by the month's end. In the Maumee and Wabash river basins, the flow was below, to much below normal, with many river gage sites experiencing 10-25% percentile flow, especially in the Wabash and southwest portions of the Maumee river basins.

Drought:

Soil moisture was high at the start of May with the heavy rains that fell near the end of April. By the end of the month, however, quite a substantial reversal was observed. Negative monthly short-term soil moisture anomalies and standardized precipitation indices were observed during the month. For more detailed information, visit NOAA's Drought Information Center's website at <http://www.drought.noaa.gov>. At the end of May, with the exception of the south central lower Michigan climate division, all other divisions in the area were at least moderately dry. The east central Indiana and northeast Indiana district, were extremely dry and exceptionally dry (the most extreme condition), respectively.

The sharp decline in short term precipitation amounts were reflected strongly in the long term Palmer Drought Severity Index. The Palmer Drought Index (PDSI) indicates long-term (cumulative) meteorological drought and wet conditions.

Palmer Drought Severity Index (PDSI)						
Climate Division	Value	Category	Value	Category	PDSI Change	Precip Needed to End Drought (inches)
	4/28/2007	4/28/2007	6/2/2007	6/2/2007		
Southwest Lower Michigan	4.12	Extremely Wet	0.33	Near Normal	-3.79	N/A
South Central Lower Michigan	3.03	Very Wet	1.1	Slightly Wet	-1.93	N/A
Northwest Indiana	3.71	Very Wet	-0.38	Near Normal	-1.93	N/A
North Central Indiana	3.41	Very Wet	-0.76	Incipient Dry Spell	-4.17	1.66
Northeast Indiana	3.08	Very Wet	-1.76	Mild Drought	-4.84	1.42
East Central Indiana	4.1	Extremely Wet	0.71	Incipient Wet Spell	-3.39	N/A
Northwest Ohio	3.8	Very Wet	-0.13	Near Normal	-3.93	N/A

Palmer Drought Severity Index

Palmer Classifications	
4.0 or more	extremely wet
3.0 to 3.99	very wet
2.0 to 2.99	moderately wet
1.0 to 1.99	slightly wet
0.5 to 0.99	incipient wet spell
0.49 to -0.49	near normal
-0.5 to -0.99	incipient dry spell
-1.0 to -1.99	mild drought
-2.0 to -2.99	moderate drought
-3.0 to -3.99	severe drought
-4.0 or less	extreme drought

The PDSI is formulated to be the most effective in determining long term drought—a matter of several months—and is not as good with short-term changes (a matter of weeks). However, the rapid change in the PDSI observed through May 2007 emphasizes the relevance of the marked shift in the hydro-meteorological pattern. The early impacts are being noted with non-irrigated turf grasses browning one to two months sooner than typical and with the start of some corn crop stress. It is also noted that some farmers in east central Indiana have even preemptively likened conditions to the 1988 drought.

FLOOD STAGE REPORT

REPORT FOR:

MONTH

YEAR

May

2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
St. Joseph River (Ohio)... Newville IN	12.0	Cont.	5/1/07	13.06	4/29/2007 300AM EST
Tiffin River... Stryker OH	11.0	Cont.	5/1/07	13.36	4/28/2007 830AM EST
Kankakee River... Davis IN	10.0	Cont.	5/3/07	11.83	4/27/2007 615PM EST

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)
		WFO IWX
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		June 2007
TO: Hydrologic Information Center, W/OS31 NOAA's National Weather Service 1325 East West Highway Silver Spring, MD 20910-3283		SIGNATURE
		Patrick Murphy, Lead Meteorologist
		DATE
		July 15, 2007

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.

Summary:

...WIDESPREAD MILD TO MODERATE DROUGHT CONDITIONS DEVELOP...

June 2007 was warmer and much drier than normal across Northern Indiana, Northwest Ohio, and Extreme Southern Lower Michigan. The weather pattern, for the second month in a row, was largely influenced by an anomalously westward displacement of the Bermuda High with a dominant ridge extending from the Carolinas to the Maumee and Wabash river valleys. Many early summer cold frontal passages that provide precipitation typical to this time were not realized because of the blocking pattern and dry atmosphere associated with this ridge. The southwest part of the HSA received more episodes of showers and thunderstorms with an area near and southwest of Logansport, IN receiving between 100 and 150 percent of normal rainfall. Elsewhere, rainfall was significantly below normal. Much of south central Michigan, northeast Indiana and northwest Ohio observed rainfall deficits of 2 to 4 inches, similar to May 2007 deficits. Consequently, streamflow conditions throughout the area remain well below normal.

At Fort Wayne, Indiana, monthly precipitation totaled 3.04 inches, 1.00 inches below normal. Over 40 percent of Fort Wayne's precipitation (1.22 inches) fell during a thunderstorm on June 3. The monthly average temperature was 71.5 degrees, 1.8 degrees above normal. Of particular note, the average daily maximum temperature of 83.4 degrees was 2.8 degrees above normal. This strong diurnal temperature rise is typical of the prevailing weather pattern and also creates above normal evapotranspiration rates. June 2007 at Fort Wayne now ranks as the sixteenth warmest June on record, but did not rank in the top 20 driest June (data from 1911 to present).

At South Bend, Indiana, the monthly precipitation was much lower at 1.80 inches, with a deficit of 2.39 inches. The monthly average temperature was 71.3 degrees, 2.3 degrees above normal. Again, similar to Fort Wayne, the average daily maximum temperature disproportionately contributed to the above normal monthly mean temperature. The average daily maximum temperature at South Bend was 82.6 degrees, 3.0 degrees above normal. June 2007 at South Bend now ranks as the twelfth warmest and eleventh driest June on record (data from 1940 to present).

Flood Conditions:

Only infrequent, minor rises above baseflow were observed.

River Conditions:

Owing to abnormally low rainfall and strong evaporative and seasonally strong transpirative processes, streams and rivers transitioned from near normal at the start of June in the Kankakee and St. Joseph River (Michigan) river basins to well below normal by the month’s end. In the Maumee and Wabash river basins, flows remained below to much below normal with many river gage sites experiencing 10-25% percentile flow.

Drought:

Strongly negative monthly short-term soil moisture anomalies and standardized precipitation indices were observed during the month. For more detailed information, visit NOAA’s Drought Information Center’s website at <http://www.drought.noaa.gov>. At the end of June, all divisions in the area were at least experiencing mild to moderate drought. The northeast Indiana and southwest lower Michigan districts were approaching severe drought.

The sharp decline in short term precipitation amounts were reflected strongly in the long term Palmer Drought Severity Index. The Palmer Drought Index (PDSI) indicates long-term (cumulative) meteorological drought and wet conditions. Prolonged moisture stresses during the corn tasseling and silking stages will undoubtedly result in potential yield losses throughout the HSA.

Climate Division	Palmer Drought Severity Index (PDSI)				PDSI Change	Precip Needed to End Drought (inches)
	Value	Category	Value	Category		
	6/2/2007	6/2/2007	6/30/07	6/30/07		
Southwest Lower Michigan	0.33	Near Normal	-2.88	Moderate Drought	-3.21	4.59
South Central Lower Michigan	1.1	Slightly Wet	-1.02	Mild Drought	-2.12	0.76
Northwest Indiana	-0.38	Near Normal	-2.02	Moderate Drought	-1.64	3.14
North Central Indiana	-0.76	Incipient Dry Spell	-2.43	Moderate Drought	-1.67	4.42
Northeast Indiana	-1.76	Mild Drought	-2.93	Moderate Drought	-1.17	5.86
East Central Indiana	0.71	Incipient Wet Spell	-1.24	Mild Drought	-1.95	1.99
Northwest Ohio	-0.13	Near Normal	-2.50	Moderate Drought	-2.37	4.23

Palmer Drought Severity Index

Palmer Classifications	
4.0 or more	extremely wet
3.0 to 3.99	very wet
2.0 to 2.99	moderately wet
1.0 to 1.99	slightly wet
0.5 to 0.99	incipient wet spell
0.49 to -0.49	near normal
-0.5 to -0.99	incipient dry spell
-1.0 to -1.99	mild drought
-2.0 to -2.99	moderate drought
-3.0 to -3.99	severe drought
-4.0 or less	extreme drought

The PDSI is formulated to be the most effective in determining long term drought—a matter of several months—and is not as good with short-term changes (a matter of weeks). However, the rapid decline in the PDSI observed in May and June 2007 emphasizes the relevance of the marked shift in the hydro-meteorological pattern. The impacts were noted with non-irrigated turf grasses browning one to two months sooner than typical and with continued corn crop stress. It is also noted that some farmers in east central Indiana have even likened conditions to the 1988 drought.

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)

WFO IWX

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR

June 2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
No Flooding					

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)
		WFO IWX
MONTHLY REPORT OF HYDROLOGIC CONDITIONS		REPORT FOR: MONTH YEAR
		July 2007
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 Patrick Murphy, Lead Meteorologist
		DATE August 15, 2007

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.

Summary:

...WIDESPREAD MILD TO SEVERE DROUGHT CONDITIONS PERSIST...

July 2007 temperatures were slightly cooler than normal and precipitation amounts were quite varied across Northern Indiana, Northwest Ohio, and extreme Southern Lower Michigan. Little overall change by month's end was noted in long term drought conditions. The weather pattern, for the third month in a row, was largely influenced by an anomalously westward displacement of the Bermuda High with a dominant ridge extending from the Gulf Coast states into the Hydrologic Service Area (HSA) At times, a further westward propagation of the ridge allowed for an increased frequency of thunderstorm complexes to move through the southern Great Lakes. Much of south central Michigan, northeast Indiana and northwest Ohio observed rainfall deficits of 1 to 3 inches, slightly less than May and June 2007 deficits. Consequently, streamflow conditions remained well below normal throughout the Wabash and Maumee river basins. Conversely, southern Berrien County Michigan and parts of northwest Indiana and north central Indiana received significantly greater rainfall. This area observed rainfall on the order of 2 to 6 inches above normal and streamflow conditions returned to near normal in this area.

At Fort Wayne, Indiana, monthly precipitation totaled 1.82 inches, 1.76 inches below normal. This placed July 2007 for Fort Wayne as the 12th driest July on record since 1911. The monthly average temperature was 71.6 degrees, 1.8 degrees below normal. The average daily maximum temperature of 83.8 degrees was just 0.5 degrees below normal. While the average temperature was slightly below normal there continued to be a long-standing trend for strong diurnal temperature rise. This is typical of the prevailing weather pattern and also creates above normal evapotranspiration rates.

At South Bend, Indiana, the monthly precipitation was significantly higher at 5.40 inches, with a monthly surplus of 1.67 inches. This placed July 2007 for South Bend as the 13th wettest July on record since 1940. The monthly average temperature was 72.2 degrees, 0.8 degrees below normal. Again, similar to Fort Wayne, the average daily maximum temperature contributed less to the slightly below normal monthly mean temperature. The average daily maximum temperature at South Bend was 83.3 degrees, 0.2 degrees above normal

Flood Conditions:

Only infrequent, minor rises above baseflow were observed. One of the more substantial rises was observed on the Kankakee River at Davis, where the river crested at 8.1 feet on July 27, 1.9 feet below flood stage.

River Conditions:

Owing to exceptionally above normal rainfall, offset by strong evaporative and seasonally strong transpirative processes, streams and rivers transitioned from much below normal in the Kankakee and St. Joseph River (Michigan) river basins at the start of July to below normal by month's end. In the Maumee and Wabash river basins, flows remained below to much below normal with many river gage sites experiencing 10-25% percentile flow and even less in the upper portion of the Wabash River basin.

Drought:

Strongly negative monthly short-term soil moisture anomalies and standardized precipitation indices were observed during the month. For more detailed information, visit NOAA's Drought Information Center's website at <http://www.drought.noaa.gov>. At the end of July, all climate divisions in the area were at least experiencing mild to severe drought. Northeast Indiana was approaching severe drought.

The sharp decline in short term precipitation amounts over the past three months are reflected strongly in the long term Palmer Drought Severity Index (PDSI). The PDSI indicates long-term (cumulative) meteorological drought and wet conditions. Prolonged moisture stresses during the corn tasseling and silking stages will result in yield losses throughout the HSA. The Severe Drought categorization of southwest Lower Michigan is not indicative of conditions in the southern half of Berrien County Michigan, but is skewed toward the extreme dryness observed throughout the remainder of that particular climate district. The large scale of the climate districts (<http://www.ncdc.noaa.gov/oa/climate/onlineprod/drought/statelist.html>) do not account for small spatial differences in drought conditions.

Palmer Drought Severity Index (PDSI)						
Climate Division	Value	Category	Value	Category	PDSI Change	Precip Needed to End Drought (inches)
	6/30/07	6/30/07	7/28/07	7/28/07		
Southwest Lower Michigan	-2.88	Moderate Drought	-3.10	Severe Drought	-0.22	5.63
South Central Lower Michigan	-1.02	Mild Drought	-2.49	Moderate Drought	-1.47	4.13
Northwest Indiana	-2.02	Moderate Drought	-1.01	Mild Drought	+1.01	2.13
North Central Indiana	-2.43	Moderate Drought	-1.07	Mild Drought	+1.36	2.27
Northeast Indiana	-2.93	Moderate Drought	-2.91	Moderate Drought	+0.02	5.86
East Central Indiana	-1.24	Mild Drought	-2.28	Moderate Drought	-1.95	4.71
Northwest Ohio	-2.50	Moderate Drought	-2.28	Moderate Drought	+0.22	4.42

Palmer Drought Severity Index

Palmer Classifications	
4.0 or more	extremely wet
3.0 to 3.99	very wet
2.0 to 2.99	moderately wet
1.0 to 1.99	slightly wet
0.5 to 0.99	incipient wet spell
0.49 to -0.49	near normal
-0.5 to -0.99	incipient dry spell
-1.0 to -1.99	mild drought
-2.0 to -2.99	moderate drought
-3.0 to -3.99	severe drought
-4.0 or less	extreme drought

The PDSI is formulated to be the most effective in determining long term drought—a matter of several months—and is not as good with short-term changes (a matter of weeks). However, the rapid decline in the PDSI that was observed in May and June 2007 emphasized the relevance of a marked shift in the hydro-meteorological pattern. The impacts were noted with non-irrigated turf grasses browning one to two months sooner than typical and with increased corn crop stress. Corn yield reduction estimates are quite varied, but anticipated to be substantial.

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)

WFO IWX

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR

July 2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
No Flooding					

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
		AUGUST 2007
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 10, 2007

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.

Summary:

...DROUGHT CONDITIONS GIVES WAY TO NEAR RECORD FLOODS IN OHIO...

For August, 2007, drought conditions eased considerably across northern Indiana, southwestern Lower Michigan, and northwest Ohio. The month started out dry as the area had been in drought conditions for the past several months. The synoptic pattern showed a large area of high pressure in the mid levels centered over the central U.S. and a mean trough over eastern Great Lakes region. This resulted in a quasi-stationary boundary extending across portions of the Midwest region. This boundary was the focus for showers and thunderstorms across a large part of the IWX HSA during the week of the 13th through the 18th. Rainfall totals of 1 to 3 inches were not uncommon across the northern half of the area. This allowed rivers across the northern area to begin rising, but all streams remained below flood stage.

The following week, beginning about the 20th, the remnants of Tropical Storm Erin, which had made landfall across south Texas late in the night the 16th, then traveled into the Midwest bringing heavy rains to the HSA. The heaviest rainfall occurred across portions of northwest Ohio where rainfall total in excess of 6 inches were reported. This caused substantial rises on the Blanchard, the Maumee, the Auglaize, the Kankakee, and both St. Joseph Rivers. The worst flooding occurred on the Blanchard River at Ottawa. The river crested at 31.7 feet on the 23rd making it the second highest crest ever recorded. The 31.7 foot stage was 1.6 feet below the record stage on March 13, 1913.

Fort Wayne recorded 9.69 inches of rain for the month. This was 6.09 inches above normal. The highest 24 hour rainfall total during the month was 4.97 inches which fell from the 20th to the 21st. Temperatures averaged about 3 degrees above normal for the entire month. The average high was 84.6 degrees, which was 2.8 degrees above normal. The average low was 63.7 degrees which was 3.3 degrees above normal.

South Bend recorded a record rainfall for the month of August. For the month, 8.88 inches of rain was reported. This broke the old record of 8.30 inches recorded in 1979. The greatest 24 hour total during the month was 1.84 inches which occurred on the 5th. The temperature at South Bend averaged 2 degrees above normal for the month. The average high was 82.4 degrees, which was 1.7 degrees above normal. The average low was 63.6 degrees which was 2.3 degrees above normal.

Flood Conditions:

Flooding was a major problem during the last 2 weeks of the month. A total of 10 sites reported flooding, and numerous others reported river levels to Action Stage or above. The river with the highest crest was the Blanchard at Ottawa. It crested at 31.7 feet, which was 8.7 feet above flood stage and 1.6 feet below record stage. Flooding began on the 20th when the Kankakee River at Davis went above flood stage. By the end of the month, all rivers had fallen below flood stage with the exception of the Kankakee River at Davis. Most rivers crested at between 1 and 3 feet above flood stage, but the Blanchard River at Ottawa crested at 8.7 feet above flood stage.

River Conditions:

As was mentioned above, all but one river had returned to below flood stage conditions. Most rivers were in flood for, at most 3 days. The exceptions were the Kankakee River at Davis (11+ days), the St. Joseph Ohio River near Newville (9 days), the Tiffin River at Stryker (8 days), and the Blanchard River at Ottawa (6 days).

Drought:

Given the well above normal to record rainfall totals, drought conditions have been eliminated across the entire HSA. The latest drought conditions can be found at the web site www.drought.noaa.gov.

FLOOD STAGE REPORT

REPORT FOR:
 MONTH YEAR
 AUGUST 2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
TIFFIN RIVER AT STRYKER	11.0	8/21/2007	8/29/2007	12.7	8/23/2007
KANKAKEE RIVER AT DAVIS ROUTE 30	10.0	8/20/2007	CONTINUED	12.6	8/23/2007
MAUMEE RIVER AT NAPOLEON	12.0	8/22/2007	8/24/2007	13.09	8/23/2007
MAUMEE RIVER 1WSW DEFIANCE	10.0	8/22/2007	8/25/2007	12.78	8/23/2007
AUGLAIZE RIVER 5SW DEFIANCE POWER PLANT	21.0	8/22/2007	8/24/2007	23.13	8/24/2007
ST. JOSEPH RIVER OHIO 4NE NEWVILLE	12.0	8/21/2007	8/30/2007	13.36	8/27/2007
ST. JOSEPH RIVER OHIO 8NE ST JOE. RIVER FORT WAYNE	12.0	8/21/2007	8/22/2007	12.09	8/22/2007
BLANCHARD RIVER 1NW OTTAWA	23.0	8/21/2007	8/27/2007	31.7	8/23/2007
ST. JOSEPH RIVER MICHIGAN AT SOUTH BEND	5.5	8/23/2007	8/26/2007	7.0	8/24/2007
ST. JOSPEH RIVER MICHIGAN AT NILES	11.0	8/24/2007	8/24/2007	11.19	8/24/2007

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
		SEPTEMBER 2007
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 3, 2007

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.

Summary:

...September was a warm and relatively dry month...

September 2007 was characterized by above normal temperatures and below normal rainfall. After seeing record rainfall in August, South Bend recorded only about a third of normal precipitation. For the month, South Bend recorded 1.48 inches of rain. This is 2.31 inches below the climatological normal of 3.79 inches. Fort Wayne, however, reported only slightly below normal rainfall values. Nearly two and a half inches (2.47) of rain fell at the Fort Wayne airport. The normal total should be 2.81 inches. This is 0.34 inches below normal for the month.

Above to well above normal temperatures were observed across northern Indiana, southern lower Michigan, and northwest Ohio. For the month, the average high temperature at the Fort Wayne airport was 79.4 degrees. The normal should be 75.4. The average low temperature was 54.5 degrees which is 1.7 degrees above the normal of 52.8 degrees. The average temperature for Fort Wayne was 66.9 degrees. This is 2.8 degrees above the normal temperature of 64.1 degrees.

In South Bend, similar readings were noted. For September, the average high temperature was 78.6 degrees. The normal high should be 73.6 degrees. This represents an average high that was 5 degrees above normal. Overnight lows averaged 56.3 degrees, which was 3 degrees above the climatological average of 53.3 degrees.

Flood Conditions:

There was very little flooding during the month of September. At the beginning of the month, the Kankakee River at Davis was slightly above flood stage. This was a result from the heavy rains and flooding received in August. The River fell below flood stage during the day on the 1st. The only other river to experience flood conditions was the St. Joseph Michigan River at Three Rivers. This river briefly exceeded flood stage on the 9th and 10th. The St. Joseph exceeded flood stage by 0.1 feet on the 9th and briefly on the morning of the 10th.

River Conditions:

With the exception of slight rises during the second week of the month, all the rivers in the Northern Indiana Hydrologic Service Area (HSA) were generally well below flood stage. As mentioned above, slightly above flood stages were reported on the Kankakee River at Davis and the St. Joseph Michigan River at Three Rivers.

Drought:

According to the U.S. Drought Monitor, dated September 25, 2007 and released on September 27th, the Northern Indiana HSA is not experiencing drought conditions. Despite the lower than normal precipitation and higher than normal temperatures, drought conditions are not present across the area. Abnormally dry conditions are present in central and southern Indiana and northern 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 2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER AT DAVIS ROUTE 30	10.0	8/20/2007	9/1/2007	12.6	8/23/2007
ST. JOSEPH RIVER MICHIGAN AT THREE RIVERS	7.0	9/9/2007	9/10/2007	7.1	9/9/2007

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 2007
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 6, 2007

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.

Summary

...Warmer than normal conditions persisted through October...

October continued the trend from September as temperatures remained above normal and precipitation was below normal. For the month, Fort Wayne experienced temperatures that averaged more than 7 degrees above normal. The average high temperature was 70.1 degrees which was 7.1 degrees above normal. The average low temperature was 49.2 degrees. This was 7.4 degrees above the climatological normal value. The average temperature for the month was 59.7 degrees, which was 7.3 degrees above the normal of 52.4 degrees. Similar departures from normal were experienced at South Bend. The average high temperature was 68.6 degrees which was 6.8 degrees above normal. The average low was 49.3 degrees. This was 7 degrees above normal. For the entire month, the average temperature was 59.0 degrees and this was 6.9 degrees above the climatological mean value.

Precipitation values were mixed across the area. Fort Wayne recorded 1.91 inches of rainfall for the month. This was 0.72 inches below the normal value of 2.63 inches that is normal. Conversely, South Bend reported a rainfall total that was above the normal value. For the month, 4.02 inches of rainfall were reported at the South Bend Airport. This exceeds the normal value of 3.27 inches by three-quarters of an inch.

Flood Conditions

There were no flooding issues across the Northern Indiana Hydrologic Service Area (HSA). There were 4 rainfall events at South Bend that produced more than a half an inch in a day. However, these events only produced minimal rises on the rivers in this area. At Fort Wayne, there were no events that produced more than a half an inch during a single day. The greatest 24 hour rainfall totals were 0.59 inches at Fort Wayne and 1.18 at South Bend.

Drought

Although there was a monthly deficit of rainfall across portions of the area, the entire region remains free of drought conditions. According to the latest Drought Monitor, northern Indiana, northwest Ohio, and southern Lower Michigan continue to experience no drought conditions. The drought conditions that surrounded the area last month have eased significantly.

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 2007

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

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 NOVEMBER 2007
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 December 5, 2007

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.

Summary

...Normal temperatures experienced across the HSA...

November 2007 saw an end to above normal temperatures as typical fall conditions transitioned to more winter type conditions. For the month, Fort Wayne averaged a high temperature of 48.3 degrees. This was only 0.2 degrees below the normal value of 48.5 degrees. The average low temperature was 32.5 degrees and this was also 0.2 degrees below the normal value of 32.7 degrees. South Bend experienced similar departures from normal. The average high temperature was 47.3 degrees and this was 0.4 degrees below the normal value of 47.7 degrees. The average low was 32.2 degrees which was 0.4 degrees below the normal of 32.6 degrees.

Departures from normal for precipitation for the month was mixed at the two climatological sites. Fort Wayne reported 4.21 inches for November which was 1.23 inches above the normal value of 2.98 inches. Of the reported precipitation, only a trace fell as snow. This was a deficit of 3.0 inches from the normal amount. At South Bend, conditions were a little bit drier, although more snow was reported. For the month, 2.19 inches of precipitation was reported which was 1.20 inches below the normal value of 3.39 inches. Of this amount, 2.6 inches of snow was observed at the airport. This was 5.1 inches below the normal value of 7.7 inches.

Flood Conditions

There were no flooding issues to deal with during the month of November. There were brief rises on a couple of the rivers late in the month. The greatest 24 hour amount of rainfall at the Fort Wayne Airport was 2.47 inches from the 21st to the 22nd, while the greatest 24 hour value at South Bend was 1.16 inches also on the 21st and 22nd. While there was 1 to 2 inch rainfall values reported, there were no significant rises on the rivers. No river reached flood stage and only the Kankakee River at Davis reached action stage from the 21st through the 28th.

Drought Conditions

No drought conditions were noted across the HSA. Abnormally dry conditions remained over the far southern portions of Indiana and northern and central 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

NOVEMBER 2007

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

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
		DECEMBER 2007
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 4, 2008

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.

Summary:

...Significant snowfall occurs across the parts of the HSA...

Most areas of northern Indiana/northwest Ohio/southwestern Lower Michigan experienced significant snowfall during the month of December. The first winter storm affected the area the first week of the month. There was a wintry mix with this storm system, with the majority of the precipitation falling as rain or freezing rain. As much as ¼ inch of ice was produced by this storm. The precipitation from this system produced only minor rises on the rivers across the area.

The next system created significant snowfall across mainly northern portions of Indiana. For the week of December 11th through the 17th, one to three inches of liquid-equivalent precipitation fell across the northern two-thirds of the HSA. Initially, the precipitation fell as rain with values up to 1 inch...then the precipitation changed to snow. It was during this week that snow depths were in the 6 to 8 inch range.

During the week preceding Christmas, temperatures warmed up and nearly all snowfall melted. This melting combined with additional rains of up to another inch caused a few rivers to exceed flood stage. These rivers were less than a foot above flood stage.

For the month, Fort Wayne experienced near normal highs and lows. The average high temperature was 35.4 degrees which was 0.4 degrees below the normal of 35.8 degrees. Meanwhile, the average low temperatures were 23.7 degrees which was 1.4 degrees above the normal of 22.3 degrees. At South Bend, the average high temperatures were 34.9 degrees. This was 0.7 degrees below the normal of 35.6 degrees. The average low temperatures were 24.1 degrees which was 2.4 degrees above the normal of 22.7 degrees.

December was a rather wet month for the Fort Wayne airport while South Bend experienced a near normal month in terms of precipitation. Fort Wayne observed 4.45 inches of liquid for the month. This was 1.68 inches above the normal value of 2.77 inches. South Bend reported just over 3 inches of liquid (3.03 inches) for the month. This was just 0.06 inches below the normal value of 3.09 inches.

Flood conditions

While December saw normal to above normal precipitation values, there was not a significant response from the rivers. There were two periods when a few rivers exceeded flood stage. The first period was from the 11th to the 18th. Eight sites reported river values in excess of flood stage. Most sites reported values around a foot above flood stage, with the Saint Mary's River at Decatur reporting the highest value above flood stage (1.8 feet above the 17 foot flood stage). The second episode of flooding occurred the week of Christmas. Three sites reported stages above flood...with the highest reading above flood coming from the Eel River at North Manchester. The stage of 9.89 feet on the 23rd was 0.89 feet above flood stage.

Drought conditions

No drought conditions were noted across the entire HSA for the month.

FLOOD STAGE REPORT

REPORT FOR:

MONTH YEAR

DECEMBER 2007

RIVER AND STATION	FLOOD STAGE (Feet)	ABOVE FLOOD STAGES (Date)		CREST	
		FROM	TO	STAGE (Feet)	DATE
KANKAKEE RIVER @ DAVIS	10.0	12/12/07	12/18/07	11.08	12/14/07
EEL RIVER @ NORTH MANCHESTER	9.0	12/11/07	12/13/07	9.94	12/12/07
ST. MARY'S RIVER @ DECATUR	17.0	12/12/07	12/16/07	18.8	12/14/07
TIFFIN RIVER @ STRYKER	11.0	12/12/07	12/17/07	12.43	12/14/07
ST. JOSEPH RIVER @ FORT WAYNE	12.0	12/12/07	12/12/07	12.0	12/12/07
MAUMEE RIVER @ DEFIANCE	10.0	12/13/07	12/14/07	10.42	12/13/07
ST. JOSEPH RIVER @ NEWVILLE	12.0	12/13/07	12/14/07	12.08	12/14/07
BLANCHARD RIVER @ OTTAWA	23.0	12/13/07	12/14/07	23.31	12/14/07
KANKAKEE RIVER @ DAVIS	10.0	12/23/07	12/25/07	10.34	12/24/07
ST. JOSEPH RIVER @ FT. WAYNE	12.0	12/23/07	12/24/07	12.11	12/23/07
EEL RIVER @ NORTH MANCHESTER	9.0	12/23/07	12/24/07	9.89	12/23/07