

NWS FORM E-5 NATIONAL NATIONAL WEATHER SERVICE	U.S. DEPARTMENT OF COMMERCE OCEANIC AND INDIANAPOLIS, INDIANA	HYDROLOGIC SERVICE AREA: ATMOSPHERIC ADMINISTRATION
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS YEAR: 1999		REPORT FOR: MONTH: January
TO: Hydrometeorological Information Center NWS/Office of Hydrology, W/OH12x1 1325 East-West Highway, Room 7128 Silver Spring MD. 20910		SIGNATURE: (In Charge of Hydrologic Service Area) DATE: March 13, 2007

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

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

Two significant weather events took place in Indiana during January 1999. Local news media termed these two events Winter Storm 99 and Winter Flood 99. No January at Indianapolis since January snowfall records began in 1885 had more than 18 inches of snow and more than 6 inches of liquid water.

The cold weather of late December continued into January. A New Year's Day storm dumped over 10 inches of snow on Indianapolis by late on the 2nd. This was one of the biggest snowfalls since the blizzard of January 1978 for Indianapolis and much of central and northern Indiana. Snowfall ranged from less than an inch in extreme southern Indiana to more than 20 inches in northwest Indiana. For northwest Indiana, this snowfall was greater than the blizzard of January 1978. Snowfall at Chicago was the 2nd greatest of record for a single storm.

Because the temperatures had risen above freezing in much of central Indiana, road conditions became treacherous. The combination of thick ice and additional light snow on top of the ice make travel difficult through much of the 11th. Warmer weather on the 12th and 13th improved road conditions. A brief cold snap on the 14th and 15th brought a return to poor road conditions. Temperatures rose above freezing on the 16th and remained above normal through the end of January.

As everyday travel returned to normal the week of the 17th, a new storm was beginning to take shape. As melting snow pushed streams and rivers to near bankfull levels, a warm rain storm on the 21st and 22nd brought 2 to 5 inches of rain to many portions of central and southern Indiana. Streams and rivers quickly left their banks late on the 21st and early on the 22nd. Extensive widespread flooding was in progress by late on the 22nd.

Flooding along the White River in Hamilton and northern Marion Counties and along the Wildcat Creek in Howard County was the highest since late December 1990 and early January 1991. Flooding along the Wabash River from Lafayette to Covington was the highest since April 1994. Flooding in southern Indiana was extensive, as crests approached or slightly exceeded those of June 1998.

Five persons died as a result of driving into flooded roads following the rains on the 21st and 22nd. None of these deaths were in the current Indianapolis HSA.

Flood potential statements and flood warnings gave river residents early notice of the impending flood. Evacuations did occur along Wildcat Creek on the eastside of Kokomo. Most river residents along other flooded streams and rivers parked cars on high ground and moved furnishings to higher levels.

Many local river and several state roads flooded. Travel was difficult in Jackson county. Bridge construction had closed U.S. Highway 50, the only east-west road that the East Fork White River does not flood in Jackson county. The East Fork White River flooded all local roads used as a detour for U.S. Highway 50.

Small rivers and streams crested by the 25th. Nearly 8 rainless days allowed flood waters from central Indiana and east central Illinois to pass by the Wabash River at Mount Carmel, Illinois. As the flooding was nearing an end in southwest Indiana and southeast Illinois, rain on the last day of January extended flooding into February.

During early January, temperatures dropped to their lowest level in central Indiana in nearly 2 years. On January 5th, a minus 26 degrees occurred in northwest Indiana. This was the coldest temperature in Indiana since January 1994, the year the all-time Indiana record low temperature was set. Also, on January 5th, 1999, nearby state of Illinois broke their all-time record low with a -36 degree reading. Temperatures during the first 15th days of January averaged well below normal.

For the remainder of January above normal temperatures dominated. During the warm rain on the 22nd, temperatures were 30 degrees above normal at Indianapolis. The warm temperatures during the last half of January would more than offset the cold temperatures of the first half. For the month, temperatures averaged ½ to 4 ½ degrees above normal across Indiana.

January rainfall totals ranged from 2 ½ inches in northern Indiana to nearly 7 inches in southern Indiana. Snowfall totals ranged from 1 inch in southwest Indiana to nearly 40 inches in northern Indiana. The Indianapolis area experienced its 10th

wettest January of record and the wettest since 1950. Monthly snowfall at Indianapolis was the 8th highest of record for January and the greatest since 1996.

The coldest temperature of the month occurred on either the 5th or 10th. Low temperatures for January ranged from near zero in southern Indiana to -26 degrees in northwest Indiana. Low temperatures fell below 33 degrees on 21 to 28 days and below zero in central and northern Indiana on 4 to 6 days.

The warmest temperatures of the month occurred from the 22nd to the 27th. Maximum temperatures reached into the 60s almost statewide. The highest temperatures in northwest and north central areas were in the 50s. The maximum temperature did not exceed 32 degrees on 9 to 16 days during the month.

Measurable precipitation fell on 13 to 17 days during January. Most locations received an inch or more of liquid precipitation on 1 or 2 days. Some locations in southern Indiana had 3 or 4 days with an inch or more of rain.

At the end of January, ground conditions remained very wet. Flooding continued along the Wabash River in western Indiana and eastern Illinois and along the White River in southwest Indiana. There was not any frost in the ground or snow on the ground in central and southern Indiana.

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
 HYDROLOGIC SERVICE AREA
 NOAA, NATIONAL WEATHER SERVICE
 INDIANAPOLIS, INDIANA

2/18/99 FLOOD STAGE REPORT Jan-Feb
 1999 Crests

CREST STAGE	STREAM AND LOCATION DATE	FLOOD	ABOVE FLOOD STAGE	
		STAGE	FROM	TO

BIG BLUE RIVER.....				
8.62	CARTHAGE IN. 1/22/99	7.0	1/22/99	1/23/99
6.83	CARTHAGE IN. 2/07/99	7.0		
14.70	SHELBYVILLE IN. 1/23/99	11.0	1/22/99	1/24/99
10.93	SHELBYVILLE IN. 2/08/99	11.0		
BIG RACCOON CREEK.....				
14.26	FINCASTLE 3 W IN. 1/22/99	11.0	1/22/99	1/23/99
11.04	FINCASTLE 3 W IN. 2/07/99	11.0		
11.97	COXVILLE IN. 1/18/99	14.0		
14.36	COXVILLE IN. 1/22/99	14.0		
13.90	COXVILLE IN. 2/07/99	14.0		
BIG WALNUT CREEK.....				
16.06	REELSVILLE IN. 1/23/99	12.0	1/22/99	1/23/99
13.49	REELSVILLE IN. 2/07/99	12.0	2/07/99	2/08/99
BUCK CREEK.....				
11.04	ACTON IN. 1/22/99		1/21/99	1/23/99
8.87	ACTON IN. 2/07/99			
BUSSEY CREEK.....				
17.02	CARLISLE 2 NW IN. 1/24/99	16.0	1/22/99	1/25/99

	CARLISLE 2 NW IN.	16.0		
14.22	2/07/99			
	CARLISLE 2 NW IN.	16.0		
13.78	2/09/99			
CLIFTY CREEK.....				
	HARTSVILLE IN.			
6.13	1/23/99			
	HARTSVILLE IN.			
6.23	2/07/99			
DEER CREEK.....				
	DELPHI 2.6 NE IN.			
10.84	1/23/99			
	DELPHI 2.6 NE IN.			
5.25	2/08/99			
EAGLE CREEK.....				
	ZIONSVILLE IN.	7.0	1/22/99	1/23/99
10.70	1/22/99			
	ZIONSVILLE IN.	7.0		
7.98	2/07/99			
	SPEEDWAY IN.	9.0		
11.37	1/22/99			

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CREST		FLOOD	ABOVE FLOOD STAGE	
STAGE	STREAM AND LOCATION	STAGE	FROM	TO
	DATE			

	EAST FORK WHITE R.....			
	COLUMBUS IN.	9.0	1/23/99	1/25/99
12.64	1/24/99			
	COLUMBUS IN.	9.0		
7.68	2/09/99			
	SEYMOUR 2 N IN.	12.0	1/22/99	1/27/99
17.47	1/24/99			
	SEYMOUR 2 N IN.	12.0	2/07/99	2/11/99
16.70	2/08/99			
	SEYMOUR 2 N IN.	12.0	2/13/99	2/14/99
12.31	2/13/99			
	BEDFORD 8SE IN.	20.0	1/23/99	1/30/99
28.15	1/26/99			

16.97	BEDFORD 8SE IN.	20.0		
	2/08/99			
22.86	BEDFORD 8SE IN.	20.0	2/09/99	2/13/99
	2/11/99			
24.50	BEDFORD 4 SW IN.	20.0	1/25/99	1/29/99
	1/27/99			
19.30	BEDFORD 4 SW IN.	20.0		
	2/12/99			
7.80	WILLIAMS IN.	8.0		
	1/24/99			
10.90	WILLIAMS IN.	8.0	1/25/99	1/28/99
	1/28/99			
8.30	WILLIAMS IN.	8.0		
	2/12/99			
16.65	SHOALS HIWAY 50 BRID IN.	20.0		
	1/24/99			
21.16	SHOALS HIWAY 50 BRID IN.	20.0	1/27/99	1/29/99
	1/28/99			
14.94	SHOALS HIWAY 50 BRID IN.	20.0		
	2/08/99			
15.96	SHOALS HIWAY 50 BRID IN.	20.0		
	2/13/99			
	EEL RIVER.....			
20.79	BOWLING GREEN IN.	17.0	1/22/99	1/24/99
	1/23/99			
19.42	BOWLING GREEN IN.	17.0	2/07/99	2/08/99
	2/08/99			
	EMBARRAS RIVER.....			
23.37	STE MARIE IL.	19.0	1/22/99	1/26/99
	1/23/99			
15.72	STE MARIE IL.	19.0		
	2/02/99			
21.28	STE MARIE IL.	19.0		
	2/09/99			
21.85	LAWRENCEVILLE IL.	11.0		
	1/25/99			
19.00	LAWRENCEVILLE IL.	11.0		
	2/11/99			
	FALL CREEK.....			
7.77	FORTVILLE 2 NW IN.			
	1/23/99			
6.52	FORTVILLE 2 NW IN.			
	2/08/99			
10.96	MILLERSVILLE IN.	7.0	1/22/99	1/25/99
	1/23/99			
7.53	MILLERSVILLE IN.	7.0		
	2/08/99			

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CREST STAGE	STREAM AND LOCATION DATE	FLOOD ABOVE FLOOD STAGE		
		STAGE	FROM	TO

FLATROCK RIVER.....				
7.68	ST. PAUL IN. 1/23/99			
4.75	ST. PAUL IN. 2/08/99			
HARBERTS CREEK.....				
5.60	Madison IN. 1/22/99			
5.84	Madison IN. 1/23/99			
5.71	Madison IN. 2/07/99			
MILL CREEK.....				
13.74	CATARACT 3 E IN. 1/18/99	10.0	1/17/99	1/19/99
19.42	CATARACT 3 E IN. 1/23/99	10.0	1/21/99	1/25/99
15.87	CATARACT 3 E IN. 2/08/99	10.0	2/07/99	2/09/99
14.03	MANHATTAN 5 S IN. 1/22/99			
12.03	MANHATTAN 5 S IN. 2/07/99			
MISSISSINEWA RIVER.....				
10.21	RIDGEVILLE 2 E IN. 1/18/99	10.0		
13.93	RIDGEVILLE 2 E IN. 1/22/99	10.0	1/21/99	1/24/99
10.64	RIDGEVILLE 2 E IN. 2/07/99	10.0		
MUSCATATUCK RIVER.....				
	VERNON 1SW 1 SW IN.	17.0		

16.00 1/23/99
 VERNON 1SW 1 SW IN. 17.0
 17.27 2/07/99
 WHEELER HOLLOW IN. 16.0
 21.90 1/25/99
 WHEELER HOLLOW IN. 16.0
 19.80 2/10/99
 WHEELER HOLLOW IN. 16.0
 19.90 2/11/99

N. F. EMBARRAS RIVER.....

OBLONG 2 W .
 22.22 1/22/99
 OBLONG 2 W .
 16.25 2/02/99
 OBLONG 2 W .
 20.39 2/08/99

PATOKA RIVER.....

PRINCETON 2 MI NE IN. 1/29/99
 18.89 2/01/99
 PRINCETON 2 MI NE IN.
 17.79 2/07/99
 PRINCETON 2 MI NE IN.
 16.40 2/12/99

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			FROM	TO

PIPE CREEK.....				
12.97	FRANKTON PIPE CREEK IN. 1/22/99	12.0	1/22/99	1/24/99
8.14	FRANKTON PIPE CREEK IN. 2/08/99	12.0		
SALT CREEK.....				
20.84	HARRODSBURG 2 SE IN. 1/23/99			
24.52	HARRODSBURG 2 SE IN. 2/07/99			

	SUGAR CREEK.....			
10.93	CRAWFORDSVILLE IN. 1/22/99	8.0	1/22/99	1/23/99
6.28	CRAWFORDSVILLE IN. 2/07/99	8.0		
	SUGAR CREEK...SOUTH.....			
14.60	EDINBURGN 2 NW IN. 1/23/99	9.0	1/22/99	1/25/99
10.83	EDINBURGN 2 NW IN. 2/08/99	9.0	2/07/99	2/09/99
	TIPPECANOE RIVER.....			
12.47	MONTICELLO IN. 1/24/99	9.0		
9.68	DELPHI 6 W IN. 1/24/99	8.0	1/22/99	1/26/99
5.40	DELPHI 6 W IN. 2/08/99	8.0		
	VERMILION RIVER.....			
17.25	DANVILLE 2 SE IL. 1/23/99	18.0		
13.75	DANVILLE 2 SE IL. 2/08/99	18.0		
	WABASH RIVER.....			
12.76	LOGANSPORT CICOTT ST IN. 1/23/99	17.0		
8.70	LOGANSPORT CICOTT ST IN. 2/09/99	17.0		
21.83	LAFAYETTE IN. 1/24/99	11.0	1/22/99	
14.30	LAFAYETTE IN. 2/08/99	11.0		
12.61	LAFAYETTE IN. 2/13/99	11.0		2/14/99
26.18	COVINGTON IN. 1/25/99	16.0	1/22/99	2/05/99
19.00	COVINGTON IN. 2/10/99	16.0	2/07/99	2/15/99
26.30	MONTEZUMA IN. 1/26/99	14.0	1/22/99	
21.12	MONTEZUMA IN. 2/08/99	14.0		2/18/99
25.75	CLINTON IN. 1/27/99	18.0		
22.42	TERRE HAUTE WTR CORP IN. 1/27/99	14.0	1/22/99	
19.28	TERRE HAUTE WTR CORP IN. 2/09/99	14.0		2/17/99

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CREST STAGE	STREAM AND LOCATION DATE	FLOOD	ABOVE FLOOD STAGE	
		STAGE	FROM	TO

	Wabash River continued...			
24.50	HUTSONVILLE IL. 1/29/99	16.0	1/22/99	
21.70	HUTSONVILLE IL. 2/11/99	16.0		
21.89	RIVERTON IN. 1/29/99	15.0	1/22/99	
19.17	RIVERTON IN. 2/08/99	15.0		
19.47	RIVERTON IN. 2/11/99	15.0		
24.47	VINCENNES IN. 1/29/99	17.5	1/22/99	
21.23	VINCENNES IN. 2/12/99	17.5		
22.50	VINCENNES 1 W IN. 1/29/99	16.0	1/22/99	
20.20	VINCENNES 1 W IN. 2/12/99	16.0		
29.12	MOUNT CARMEL IL. 1/29/99	19.0	1/22/99	
25.65	MOUNT CARMEL IL. 2/14/99	19.0		
20.24	NEW HARMONY IN. 1/31/99	15.0	1/23/99	
18.26	NEW HARMONY IN. 2/15/99	15.0		
WHITE LICK CREEK.....				
20.33	MOORESVILLE IN. 1/22/99	15.0	1/22/99	1/23/99
17.49	MOORESVILLE IN. 2/07/99	15.0		
WHITE RIVER.....				
9.62	MUNCIE IN. 1/23/99	9.0	1/22/99	1/23/99

7.53	MUNCIE IN.	9.0		
	2/08/99			
12.80	ANDERSON WATERWORKS IN.	10.0	1/22/99	1/24/99
	1/23/99			
8.50	ANDERSON WATERWORKS IN.	10.0		
	2/08/99			
20.42	NOBLESVILLE IN.	14.0	1/22/99	1/25/99
	1/24/99			
13.16	NOBLESVILLE IN.	14.0		
	2/08/99			
16.67	NORA IN.	11.0	1/22/99	1/26/99
	1/24/99			
10.22	NORA IN.	11.0		
	2/09/99			
8.42	BROAD RIPPLE DAM IN.		1/22/99	1/26/99
	1/24/99			
5.94	BROAD RIPPLE DAM IN.			
	2/09/99			
10.80	RAVENSWOOD IN.	6.0	1/22/99	1/26/99
	1/24/99			
16.62	INDIANAPOLIS MORRIS IN.	16.0	1/23/99	1/25/99
	1/24/99			
10.82	INDIANAPOLIS MORRIS IN.	16.0		
	2/08/99			
10.90	INDIANAPOLIS MORRIS IN.	16.0		
	2/09/99			
11.63	STOUT GENERATING STA IN.	10.0	1/22/99	
	1/23/99			
10.94	STOUT GENERATING STA IN.	10.0		1/25/99
	1/24/99			
7.41	STOUT GENERATING STA IN.	10.0		
	2/08/99			
16.61	CENTERTON 1 S IN.	12.0	1/22/99	1/27/99
	1/23/99			

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2/18/99 FLOOD STAGE REPORT Jan-Feb
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STAGE	DATE	STAGE	FROM	TO
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13.47	White River Continued... CENTERTON 1 S IN.	12.0	2/07/99	2/08/99
	2/08/99			

608.40	CENTERTON IN. 1/23/99	603.0	1/22/99	1/27/99
603.90	CENTERTON IN. 2/08/99	603.0	2/07/99	2/08/99
22.33	SPENCER IN. 1/24/99	14.0	1/21/99	1/28/99
18.51	SPENCER IN. 2/09/99	14.0	2/07/99	2/11/99
26.00	WORTHINGTON IN. 1/25/99	18.0		
23.52	WORTHINGTON IN. 2/10/99	18.0		
27.62	ELLISTON IN. 1/25/99	18.0	1/22/99	1/30/99
24.45	ELLISTON IN. 2/10/99	18.0	2/07/99	2/14/99
23.66	NEWBERRY IN. 1/26/99	13.0	1/22/99	1/30/99
19.06	NEWBERRY IN. 2/10/99	13.0	2/07/99	2/14/99
15.30	EDWARDSPORT IN. 1/20/99	15.0		
24.60	EDWARDSPORT IN. 1/27/99	15.0	1/21/99	
21.10	EDWARDSPORT IN. 2/11/99	15.0		2/16/99
24.89	PETERSBURG 3 NE IN. 1/28/99	16.0	1/22/99	2/06/99
22.11	PETERSBURG 3 NE IN. 2/13/99	16.0	2/07/99	2/18/99
24.39	PETERSBURG IN. 1/28/99	16.0	1/22/99	2/06/99
22.15	PETERSBURG IN. 2/13/99	16.0	2/07/99	2/18/99
25.10	HAZLETON IN. 1/29/99	16.0	1/22/99	
22.30	HAZLETON IN. 2/14/99	16.0		
	WILDCAT CREEK.....			
13.33	JEROME 1 SE IN. 1/23/99			
7.80	JEROME 1 SE IN. 2/08/99			
16.84	KOKOMO IN. 1/23/99	10.0	1/22/99	1/25/99
7.80	KOKOMO IN. 2/08/99	10.0		
18.07	LAFAYETTE 4 NE IN. 1/23/99	10.0	1/22/99	1/26/99
9.05	LAFAYETTE 4 NE IN. 2/09/99	10.0		

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPort, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

Beginning December 1, 1994, the Wilmington, Ohio office assumed the Hydrologic Service Area of streams and rivers in the following east central and southeast Indiana counties: Dearborn, Fayette, Franklin, Ripley, Ohio, Switzerland, Union and Wayne. This includes most of the Whitewater River Watershed in Indiana.

Beginning September 1, 1995, the Louisville, Kentucky office assumed the Hydrologic Service Area of streams and rivers in the following south central Indiana counties: Orange, Washington, Scott, Jefferson, Crawford, Harrison, Floyd, and Clark. This includes the Blue River Watershed in south central, the Muscatatuck River Drainage in Jefferson County and most of the Lost River in south central Indiana.

Beginning February 1, 1996, the Louisville, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following south central and southwest Indiana counties: Dubois and Perry including the Anderson River along the Perry/Spencer county line.

Beginning February 1, 1996, the Paducah, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following southwest Indiana counties: Gibson, Pike, Posey, Spencer, Vanderburgh and Warrick. This includes the Wabash River in the New Harmony, Indiana area.

Beginning July 15, 1998, the North Webster, Indiana office assumed the Hydrologic Service Area of the streams and rivers in the following north central and northeast Indiana counties: Lagrange, Steuben, Noble, Dekalb, Whitley, Allen, Adams, Wells, Huntington, Wabash, Grant, Blackford and Jay. This includes the headwaters of the Wabash River, the Indiana portion of the St. Joseph, St. Marys and Maumee Rivers and the Salamonie, Eel and most of the Mississinewa Rivers.

**Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway #7128
Silver Spring, MD. 20910**

**Ohio River Forecast Center
National Weather Service, NOAA
1901 South State Route 134
Wilmington, OH. 45177**

**National Weather Service Eastern Region Headquarters
Airport Corporate Headquarters
630 Johnson Avenue
Bohemia, N.Y. 11716**

**Division of Water
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Indianapolis, IN. 46204-2212**

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**U.S. Geological Survey
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**Lee Bridges
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**Rich Grant
Department of Agronomy
1026 Poultry Building
Purdue University
West Lafayette, IN. 47907-1026**

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Original plus 10 copies.

NATIONAL WEATHER SERVICE

INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: February

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)

DATE: March 13, 2007

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

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

The warm temperatures at the end of January continued nearly unabated through February. This February was not quite as warmer as February 1998, but the all-time highest temperature for February was set on the 11th at Indianapolis. The 75 degree reading at Indianapolis was also the highest so early in the year.

The above normal rainfall from January continued to some extent through February. Rainfall totals in February were less than January, but enough to keep rivers and streams high and cause lowland flooding. Extensive flooding was limited to only a few areas and was not as severe as experienced in January. For the month rainfall varied from 2 to 4 inches across the state.

The heaviest rain event to affect central and southern Indiana occurred on the 6th. Rain of 1 to 2 inches fell in much of central Indiana. This caused extensive lowland flooding along the East Fork White, White and Wabash Rivers in southern Indiana.

A relatively dry period prevailed through the 26th. Flooding ended in southwest Indiana and southeast Illinois by the 21st. Some locations had been above stage for nearly 1 month. Rivers returned to near normal levels by the 26th.

Rain of 3/4 to 1 1/2 inches fell in central and southern Indiana on the 27th. This caused rivers to approach bankfull levels. Lowland flooding returned to portions of Jackson county in southeast Indiana. High river levels continued into March.

Because of the extended warm spell, snowfall was below normal in February. Snowfall ranged from 3 to 5 inches for the month in central and southern Indiana.

The combined melted precipitation for January and February at Indianapolis was the 7th highest of record. The last time Indianapolis experienced more liquid precipitation in this time period was 1950.

Rain fell on 10 to 14 days during February. A few central Indiana locations had 1 day with an inch or more of rain.

The warmest day of the month occurred on the 11th with temperatures reaching into the 70s across Indiana. The coolest day was on the 13th or 22nd as minimum temperatures fell only into the teens. There were 3 to 5 days in central and northern Indiana when the temperature did not reach 33 degrees. Minimum temperatures fell below 33 degrees on 18 to 23 days.

At the end of February, ground conditions remained very wet. Above normal flow conditions prevailed throughout the HSA. There was not any frost in the ground or snow on the ground in central and southern Indiana.

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
 HYDROLOGIC SERVICE AREA
 NOAA, NATIONAL WEATHER SERVICE
 INDIANAPOLIS, INDIANA

3/16/99 FLOOD STAGE REPORT February
 1999

CREST STAGE	STREAM AND LOCATION DATE	FLOOD STAGE	ABOVE FLOOD STAGE FROM	TO
	BIG BLUE RIVER.....			
6.83	CARTHAGE IN. 2/07/99	7.0		
10.93	SHELBYVILLE IN. 2/08/99	11.0		
	BIG RACCOON CREEK.....			
11.04	FINCASTLE 3 W IN. 2/07/99	11.0		
13.90	COXVILLE IN. 2/07/99	14.0		
	BIG WALNUT CREEK.....			
13.49	REELSVILLE IN. 2/07/99	12.0	2/07/99	2/08/99
	BUCK CREEK.....			
8.87	ACTON IN. 2/07/99			
	BUSSERON CREEK.....			
14.22	CARLISLE 2 NW IN. 2/07/99	16.0		
13.78	CARLISLE 2 NW IN. 2/09/99	16.0		
	CLIFTY CREEK.....			
6.23	HARTSVILLE IN. 2/07/99			
4.00	HARTSVILLE IN. 2/28/99			
	DEER CREEK.....			
5.25	DELPHI 2.6 NE IN. 2/08/99			
	EAGLE CREEK.....			

7.98	ZIONSVILLE IN.	7.0		
	2/07/99			
	EAST FORK WHITE R.....			
7.68	COLUMBUS IN.	9.0		
	2/09/99			
16.70	SEYMOUR 2 N IN.	12.0	2/07/99	2/11/99
	2/08/99			
12.31	SEYMOUR 2 N IN.	12.0	2/13/99	2/14/99
	2/13/99			
16.97	BEDFORD 8SE IN.	20.0		
	2/08/99			
22.86	BEDFORD 8SE IN.	20.0	2/09/99	2/13/99
	2/11/99			
19.30	BEDFORD 4 SW IN.	20.0		
	2/12/99			
8.30	WILLIAMS IN.	8.0		
	2/12/99			
14.94	SHOALS HIWAY 50 BRID IN.	20.0		
	2/08/99			
15.96	SHOALS HIWAY 50 BRID IN.	20.0		
	2/13/99			

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
HYDROLOGIC SERVICE AREA
NOAA, NATIONAL WEATHER SERVICE
INDIANAPOLIS, INDIANA

3/16/99 FLOOD STAGE REPORT February
1999

CREST		FLOOD	ABOVE FLOOD STAGE	
STAGE	STREAM AND LOCATION	STAGE	FROM	TO
	DATE			
-----	-----	-----	-----	-----
	EEL RIVER.....			
19.42	BOWLING GREEN IN.	17.0	2/07/99	2/08/99
	2/08/99			
	EMBARRAS RIVER.....			
15.72	STE MARIE IL.	19.0		
	2/02/99			
21.28	STE MARIE IL.	19.0		
	2/09/99			
19.00	LAWRENCEVILLE IL.	11.0		
	2/11/99			
	FALL CREEK.....			
6.52	FORTVILLE 2 NW IN.			
	2/08/99			

7.53	MILLERSVILLE IN.	7.0		
	2/08/99			
	FLATROCK RIVER.....			
4.75	ST. PAUL IN.			
	2/08/99			
	HARBERTS CREEK.....			
5.71	Madison IN.			
	2/07/99			
	MILL CREEK.....			
15.87	CATARACT 3 E IN.	10.0	2/07/99	2/09/99
	2/08/99			
11.61	CATARACT 3 E IN.	10.0		
	2/28/99			
12.03	MANHATTAN 5 S IN.			
	2/07/99			
	MISSISSINewa RIVER.....			
10.64	RIDGEVILLE 2 E IN.	10.0		
	2/07/99			
	MUSCATATUCK RIVER.....			
17.27	VERNON 1SW 1 SW IN.	17.0		
	2/07/99			
10.34	VERNON 1SW 1 SW IN.	17.0		
	2/28/99			
19.80	WHEELER HOLLOW IN.	16.0		
	2/10/99			
19.90	WHEELER HOLLOW IN.	16.0		
	2/11/99			
	N. F. EMBARRAS RIVER.....			
16.25	OBLONG 2 W .			
	2/02/99			
20.39	OBLONG 2 W .			
	2/08/99			
	PATOKA RIVER.....			
18.89	PRINCETON 2 MI NE IN.		1/29/99	
	2/01/99			

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
HYDROLOGIC SERVICE AREA
NOAA, NATIONAL WEATHER SERVICE
INDIANAPOLIS, INDIANA

3/16/99 FLOOD STAGE REPORT February
1999

FLOOD ABOVE FLOOD STAGE

CREST STAGE	STREAM AND LOCATION DATE	STAGE	FROM	TO

PATOKA RIVER CONTINUED.....				
17.79	PRINCETON 2 MI NE IN. 2/07/99			
16.40	PRINCETON 2 MI NE IN. 2/12/99			
PIPE CREEK.....				
8.14	FRANKTON PIPE CREEK IN. 2/08/99	12.0		
9.58	FRANKTON PIPE CREEK IN. 2/28/99	12.0		
SALT CREEK.....				
24.52	HARRODSBURG 2 SE IN. 2/07/99			
20.68	HARRODSBURG 2 SE IN. 2/28/99			
SUGAR CREEK.....				
6.28	CRAWFORDSVILLE IN. 2/07/99	8.0		
SUGAR CREEK...SOUTH.....				
10.83	EDINBURGN 2 NW IN. 2/08/99	9.0	2/07/99	2/09/99
TIPPECANOE RIVER.....				
5.40	DELPHI 6 W IN. 2/08/99	8.0		
VERMILION RIVER.....				
13.75	DANVILLE 2 SE IL. 2/08/99	18.0		
WABASH RIVER.....				
8.70	LOGANSPORT CICOTT ST IN. 2/09/99	17.0		
14.30	LAFAYETTE IN.	11.0	2/28/99	
	LAFAYETTE IN. 2/08/99	11.0	1/22/99	
12.61	LAFAYETTE IN. 2/13/99	11.0		2/14/99
26.18	COVINGTON IN.	16.0	1/22/99	2/05/99
	1/25/99			
19.00	COVINGTON IN. 2/10/99	16.0	2/07/99	2/15/99
	MONTEZUMA IN.	14.0	1/22/99	2/18/99

21.12	2/08/99	TERRE HAUTE WTR CORP IN.	14.0	1/22/99	2/17/99
19.28	2/09/99	HUTSONVILLE IL.	16.0	1/22/99	2/21/99
21.70	2/11/99	RIVERTON IN.	15.0	1/22/99	
19.17	2/08/99	RIVERTON IN.	15.0		2/21/99
19.47	2/11/99	VINCENNES IN.	17.5	1/22/99	2/19/99
21.23	2/12/99	VINCENNES 1 W IN.	16.0	1/22/99	2/19/99
20.20	2/12/99				

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
HYDROLOGIC SERVICE AREA
NOAA, NATIONAL WEATHER SERVICE
INDIANAPOLIS, INDIANA

3/16/99 FLOOD STAGE REPORT February
1999

CREST			FLOOD	ABOVE FLOOD STAGE	
STAGE	DATE	STREAM AND LOCATION	STAGE	FROM	TO

WABASH RIVER CONTINUED.....					
25.65	2/14/99	MOUNT CARMEL IL.	19.0	1/22/99	2/20/99
18.26	2/15/99	NEW HARMONY IN.	15.0	1/23/99	2/21/99
WHITE LICK CREEK.....					
17.49	2/07/99	MOORESVILLE IN.	15.0		
WHITE RIVER.....					
7.53	2/08/99	MUNCIE IN.	9.0		
6.50	2/28/99	MUNCIE IN.	9.0		
8.50	2/08/99	ANDERSON WATERWORKS IN.	10.0		
6.50	2/28/99	ANDERSON WATERWORKS IN.	10.0		
13.16	2/08/99	NOBLESVILLE IN.	14.0		
10.22	2/09/99	NORA IN.	11.0		
		BROAD RIPPLE DAM IN.			

5.94	2/09/99				
	INDIANAPOLIS MORRIS	IN.	16.0		
10.82	2/08/99				
	INDIANAPOLIS MORRIS	IN.	16.0		
10.90	2/09/99				
	STOUT GENERATING STA	IN.	10.0		
7.41	2/08/99				
	CENTERTON 1 S	IN.	12.0	2/07/99	2/08/99
13.47	2/08/99				
	CENTERTON	IN.	603.0	2/07/99	2/08/99
603.90	2/08/99				
	SPENCER	IN.	14.0	2/07/99	2/11/99
18.51	2/09/99				
	WORTHINGTON	IN.	18.0		
23.52	2/10/99				
	ELLISTON	IN.	18.0	2/07/99	2/14/99
24.45	2/10/99				
	NEWBERRY	IN.	13.0	2/07/99	2/14/99
19.06	2/10/99				
	EDWARDSPORT	IN.	15.0	1/21/99	2/16/99
21.10	2/11/99				
	PETERSBURG 3 NE	IN.	16.0	1/22/99	2/06/99
	PETERSBURG 3 NE	IN.	16.0	2/07/99	2/18/99
22.11	2/13/99				
	PETERSBURG	IN.	16.0	1/22/99	2/06/99
	PETERSBURG	IN.	16.0	2/07/99	2/18/99
22.15	2/13/99				
	HAZLETON	IN.	16.0	1/22/99	2/19/99
22.30	2/14/99				
	WILDCAT CREEK.....				
	JEROME 1 SE	IN.			
7.80	2/08/99				
	KOKOMO	IN.	10.0		
7.80	2/08/99				
	LAFAYETTE 4 NE	IN.	10.0		
9.05	2/09/99				

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE
 HYDROLOGIC SERVICE AREA
 NOAA, NATIONAL WEATHER SERVICE
 INDIANAPOLIS, INDIANA

2/18/99 FLOOD STAGE REPORT CORRECTION Jan-Feb
 1999 Crests

CREST	STREAM AND LOCATION	FLOOD	ABOVE FLOOD STAGE	
STAGE	DATE	STAGE	FROM	TO
12.47*	TIPPECANOE RIVER..... MONTICELLO IN.	9.0		
1/24/99				

*Thousands of Cubic Feet per Second.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPort, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

Beginning December 1, 1994, the Wilmington, Ohio office assumed the Hydrologic Service Area of streams and rivers in the following east central and southeast Indiana counties: Dearborn, Fayette, Franklin, Ripley, Ohio, Switzerland, Union and Wayne. This includes most of the Whitewater River Watershed in Indiana.

Beginning September 1, 1995, the Louisville, Kentucky office assumed the Hydrologic Service Area of streams and rivers in the following south central Indiana counties: Orange, Washington, Scott, Jefferson, Crawford, Harrison, Floyd, and Clark. This includes the Blue River Watershed in south central, the Muscatatuck River Drainage in Jefferson County and most of the Lost River in south central Indiana.

Beginning February 1, 1996, the Louisville, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following south central and southwest Indiana counties: Dubois and Perry including the Anderson River along the Perry/Spencer county line.

Beginning February 1, 1996, the Paducah, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following southwest Indiana counties: Gibson, Pike, Posey, Spencer, Vanderburgh and Warrick. This includes the Wabash River in the New Harmony, Indiana area.

Beginning July 15, 1998, the North Webster, Indiana office assumed the Hydrologic Service Area of the streams and rivers in the following north central and northeast Indiana counties: Lagrange, Steuben, Noble, Dekalb, Whitley, Allen, Adams, Wells, Huntington, Wabash, Grant, Blackford and Jay. This includes the headwaters of the Wabash River, the Indiana portion of the St. Joseph, St. Marys and Maumee Rivers and the Salamonie, Eel and most of the Mississinewa Rivers.

**Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway #7128
Silver Spring, MD. 20910**

**Ohio River Forecast Center
National Weather Service, NOAA
1901 South State Route 134
Wilmington, OH. 45177**

**National Weather Service Eastern Region Headquarters
Airport Corporate Headquarters
630 Johnson Avenue
Bohemia, N.Y. 11716**

**Division of Water
402 West Washington Street
Room W264
Indianapolis, IN. 46204-2212**

**U.S. Corps of Engineers
Hydraulic Branch
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Louisville, KY. 40201**

**U.S. Geological Survey
Water Resources Division
5957 Lakeside Boulevard
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**Lee Bridges
Indiana Department of Environmental Management
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**Rich Grant
Department of Agronomy
1026 Poultry Building
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West Lafayette, IN. 47907-1026**

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Original plus 10 copies.

NATIONAL WEATHER SERVICE

INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: March

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).



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

The above normal temperatures and below normal snowfall that began in the last part of January ended in March. Two significant snow storms blanketed central and southern Indiana with 1 to nearly 9 inches of snow. Below normal temperatures allowed snow to remain on the ground until the 17th. This was the first month since July 1998 that Indianapolis experienced below normal monthly temperatures.

The first snow storm in March occurred on the 8th and 9th. Snow depths of 1 to 9 inches covered central and much of northern Indiana. The greatest snow depth extended from the Lafayette area to Decatur area in northern Indiana. Snow melted from roads by the evening of the 9th, but remained on the ground for more than a week.

The second snow storm in March occurred late on the 13th and early on the 14th. The storm deposited 1 to 9 inches of snow in southern Indiana south of a line from Sullivan to Richmond. The heaviest snow was along the White and East Fork White Rivers. Snow fell at the rate of 2 inches in 30 minutes in portions of Washington County. Snow melted from road surfaces by the evening of the 14th and remained on the ground for 3 days.

Rain at the end of February caused lowland flooding along portions of the Wabash, White and East Fork White Rivers at the beginning of March. Additional rain of 1/2 to 1 1/2 inches on the 4th and 5th extended the high water in western and southern Indiana. As significant snow covered central and northern Indiana on the 8th and 9th, rain of 1 to 1 1/2 inches fell in southwest Indiana. This produced the highest stages of the month for the White, Wabash and East Fork White Rivers in southwest Indiana and southeast Illinois. The highest crest was 3 feet above flood stage.

No measurable precipitation fell in central Indiana from the 10th through the 30rd. Cold temperatures from the 10th through the 15th allowed streams and rivers to return to near normal levels by the 16th. Temperatures in the 60s on the 16th and 17th completely melted the snow in Indiana. Snow melt from northern Indiana pushed the Wabash River above flood stage at Lafayette and to flood stage at Covington and Montezuma. This crest dissipated as it reached southwest Indiana. Snow melt in central and southern Indiana caused only slight rises in stream levels. All rivers and streams in the Indianapolis HSA were falling by the 23rd.

Monthly temperatures averaged 3 to 5 degrees below normal for March. The highest temperatures occurred on the 17th, 30th or 31st and reached into the upper 60s and lower 70s. The coolest temperatures in March occurred on the 7th, 11th or 12th and ranged from below zero in northern Indiana to lower 20s in southwest Indiana.

Maximum temperatures in March were lower than maximum temperatures in February. Minimum temperatures in northern Indiana were colder during March than in February. There were 2 to 4 days in central and northern Indiana when the temperature did not reach 33 degrees. Minimum temperatures fell below 33 degrees on 18 to 28 days. Portions of northern Indiana had 1 day with below zero temperatures.

For central Indiana, daily temperatures generally averaged below normal through the 27th. Until the end of March, the only time temperatures reached into the 60s were on the 16th and 17th. For Indianapolis, this was the coldest March since 1996.

Because February was so mild, the average temperature for March at Indianapolis was only 1 degree warmer than February. The normal increase between February and March is nearly 12 degrees. The last time Indianapolis experienced a slower February to March increase was in 1984 when February was actually warmer than March.

Liquid precipitation was below normal across central and southern Indiana for the first time since December 1998. Liquid totals ranged from 1 to 4 1/2 inches for the month. Precipitation fell on 5 to 9 days during March. A few southwest Indiana locations had 1 day with an inch or more of rain.

Monthly snowfall was above normal for almost all Indiana locations. Monthly snowfall ranged from 1 to 15 inches. This was the snowiest March in central and southern Indiana since 1996.

At the end of March, ground conditions were drying and many farmers were working their fields. Indianapolis had just ended a period of 21 consecutive days without measurable rain. Below normal flow conditions prevailed throughout the HSA.

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Beginning February 1, 1996, the Paducah, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following southwest Indiana counties: Gibson, Pike, Posey, Spencer, Vanderburgh and Warrick. This includes the Wabash River in the New Harmony, Indiana area.

Beginning July 15, 1998, the North Webster, Indiana office assumed the Hydrologic Service Area of the streams and rivers in the following north central and northeast Indiana counties: Lagrange, Steuben, Noble, Dekalb, Whitley, Allen, Adams, Wells, Huntington, Wabash, Grant, Blackford and Jay. This includes the headwaters of the Wabash River, the Indiana portion of the St. Joseph, St. Marys and Maumee Rivers and the Salamonie, Eel and most of the Mississinewa Rivers.

**Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway #7128
Silver Spring, MD. 20910**

**Ohio River Forecast Center
National Weather Service, NOAA
1901 South State Route 134
Wilmington, OH. 45177**

**National Weather Service Eastern Region Headquarters
Airport Corporate Headquarters
630 Johnson Avenue
Bohemia, N.Y. 11716**

**Division of Water
402 West Washington Street
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NATIONAL WEATHER SERVICE

INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: April

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

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

April saw a return to above normal temperatures and above rainfall for the Indianapolis HSA. Lowland flooding occurred along portions of the Tippecanoe and Wabash Rivers during the 2nd half of April. After experiencing no rain at Indianapolis for 21 consecutive days in March, rain fell on 7 consecutive days (March 31st to April 6th) and on 19 days during April.

Monthly rainfall totals ranged from nearly 3 inches in southeast Indiana to over 7 1/2 inches in north central Indiana. Much of the state received 3 to 5 inches for the month. Rainfall varied from slightly below normal to much above normal.

Initially rain in early April had little impact on rivers and streams in the Indianapolis HSA. Portions of southwest Indiana were favored and received 3 to 5 inches of rain during the first week of April. Rainfall totals of around an inch in northern Indiana on the 9th and 10th set the stage for lowland flooding on the Wabash River.

Lowland flooding along the Wabash and Tippecanoe Rivers during the second half of April was caused by five different rain events. Each rain event would catch the Wabash River high and prolong or slightly add to already swollen stream.

The first of these events occurred on the 15th and 16th. Rainfall of 2 to 3 inches fell in a 36 to 48 hour period. Rainfall was generally uniform and produced the first flood crest on the Wabash River. Interesting, the tributaries to the Wabash River above Lafayette did not flood. However, the combined flow produced lowland flooding along the Wabash River from Lafayette to Vincennes, Indiana.

The second event occurred on the 20th and 21st. Rain of 1 to 2 inches fell in much of central Indiana and east central

Illinois. This rain helped prolong the lowland flooding along the Wabash River and caused the White River to approach bankfull levels.

The third event occurred on the late evening of the 22nd and early on the 23rd. Rain of 2 to 4 inches fell in much of northern Indiana. This caused another crest to form in west central Indiana and move down the Wabash River. This crest was similar to the earlier crest in April.

The fourth event occurred on the afternoon and evening of the 27th. Rain of 1 to 1 ½ inches fell in portions of northern Indiana. This rain occurred at about the same time the crest from the upper portion of the Tippecanoe River was arriving in White County. This combination produced flooding along the Tippecanoe River in White, Carroll and Tippecanoe Counties. This third crest on the Wabash River was lower than the previous two crests and dissipated before reaching Terre Haute.

The storm system from the 27th migrated south on the 28th and produced locally heavy rain of 1 to 2 inches in southern Indiana. This rain pushed the Wabash River at Mount Carmel, Illinois to its highest level during April.

Flood crests along the Wabash River ranged from near flood stage to nearly 6 feet above flood stage. Flooding lasted about 2 weeks and did little agricultural damage.

Monthly temperatures averaged 1 to 2 1/2 degrees above normal for April. The highest temperatures occurred on the 3rd, 8th, 21st or 23rd and reached into the upper 70s and lower 80s. The coolest temperatures in April occurred on the 13th, 14th, 17th or 19th and fell into the 30s. Temperatures fell below freezing on 2 to 4 days in northern Indiana.

Precipitation fell on 13 to 19 days during April. Most locations had 1 day with an inch or more of rain. Locations in northern and southwest had 2 to 4 days with an inch or more of rain.

The warm spell from the end of March continued through April 9th. Temperatures reached into the 60s and 70s. A very cool spell occurred on the 16th and 17th. Daytime temperatures at Indianapolis on the 16th did not exceed 40 degrees. Temperatures moderated by the 19th. Warm temperatures returned for the 21st and 22nd. Near normal temperatures prevailed for the last week of April.

For the second consecutive April, temperatures did not fall below freezing at Indianapolis. The last time temperatures in Indianapolis did not fall below freezing for two consecutive Aprils was in 1872 and 1873. There have been only 7 Aprils since April temperatures began at Indianapolis in 1872 that minimum temperatures did not fall below 33 degrees.

Because of the cool March weather, flowers and trees did not advance and become damaged by late cold weather. As a result, this was one of the prettiest springs for central Indiana in several years.

At the end of April, ground conditions were wet and lowland flooding continued along portions of the Wabash River from Lafayette Indiana to Mount Carmel, Illinois. Almost all other rivers and streams in the Indianapolis HSA had above normal flow. Farmers in many areas were looking forward to drier weather.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPort, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

Beginning December 1, 1994, the Wilmington, Ohio office assumed the Hydrologic Service Area of streams and rivers in the following east central and southeast Indiana counties: Dearborn, Fayette, Franklin, Ripley, Ohio, Switzerland, Union and Wayne. This includes most of the Whitewater River Watershed in Indiana.

Beginning September 1, 1995, the Louisville, Kentucky office assumed the Hydrologic Service Area of streams and rivers in the following south central Indiana counties: Orange, Washington, Scott, Jefferson, Crawford, Harrison, Floyd, and Clark. This includes the Blue River Watershed in south central, the Muscatatuck River Drainage in Jefferson County and most of the Lost River in south central Indiana.

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Silver Spring, MD. 20910**

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National Weather Service, NOAA
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Wilmington, OH. 45177**

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NWS FORM E-5 NATIONAL NATIONAL WEATHER SERVICE	U.S. DEPARTMENT OF COMMERCE OCEANIC AND INDIANAPOLIS, INDIANA	HYDROLOGIC SERVICE AREA: ATMOSPHERIC ADMINISTRATION
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS YEAR: 1999		REPORT FOR: MONTH: May
TO: Hydrometeorological Information Center NWS/Office of Hydrology, W/OH12x1 1325 East-West Highway, Room 7128 Silver Spring MD. 20910		SIGNATURE: (In Charge of Hydrologic Service Area) DATE: March 13, 2007

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts and hydrologic products issued (WSOM E-41).

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

May was the first month in 1999 and the first time since December 1998 that the Indianapolis HSA did not experience flooding. For the month of May, temperatures were above normal and rainfall was below normal in most areas of Indiana.

Monthly rainfall totals ranged from 1 ½ inches in north central Indiana to slightly over 6 inches in south central Indiana. Much of the state received between 2 and 4 inches for the month. Rainfall ranged from less than 50% of normal to isolated areas with 50% more than normal.

The largest rain during May occurred on the evening of the 17th. Rain of 2 to 4 inches fell in small areas of south central, central and east central Indiana. Most areas of central and southern Indiana received less than 3/4 inches from this rain event. Streams and rivers only showed a minor response from this rain.

For Indianapolis, this was the driest May in 5 years. The generally fair weather allowed farmers to plant corn and soybeans at near a record pace. Corn planting finished only a day behind the record set in the drought year of 1988. For central and southern Indiana, this May was a welcome change from the wet Mays of the past several years.

The mild conditions from April prevailed throughout much of May. Temperatures in the 80s from the 10th to the 12th and from 16th to the 17th greatly advanced the cool season vegetation and allowed warm season plants to be set out 1 to 2 weeks earlier than normal. Temperatures in the 80s returned again for much of the Memorial Day weekend.

Monthly temperatures averaged from near normal to 3 1/2 degrees above normal for May. The highest temperatures occurred on the

17th for most of Indiana, Maximum temperatures were in the middle and upper 80s. The coolest temperatures occurred on 2nd or 27th for most areas in Indiana. The minimum temperatures fell into upper 30s in central and northern Indiana and middle 40s in southern Indiana. There were not any locations that experienced freezing temperatures during May.

Precipitation fell on 9 to 12 days during May. Some locations had 1 day with an inch or more of rain. A few locations in northeast Indiana had 2 days with an inch or more of rain.

At the end of May, ground conditions were wet as a result of rain on the 31st. Almost all other rivers and streams in the Indianapolis HSA were at below normal levels.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPort, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

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NWS FORM E-5	U.S. DEPARTMENT OF COMMERCE	HYDROLOGIC SERVICE AREA:
NATIONAL	OCEANIC	AND
NATIONAL WEATHER SERVICE	INDIANAPOLIS, INDIANA	ATMOSPHERIC ADMINISTRATION
MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS		REPORT FOR:
YEAR: 1999		MONTH: June
TO: Hydrometeorological Information Center NWS/Office of Hydrology, W/OH12x1 1325 East-West Highway, Room 7128 Silver Spring MD. 20910		SIGNATURE: (In Charge of Hydrologic Service Area) DATE: March 13, 2007

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What a difference a year makes. Last year at Indianapolis the rainfall received during the months of May and June was the highest since 1875 and second highest of record. This year rainfall for May and June was substantially lower. Rainfall during May was the driest since 1994 and June was the driest since 1991. The combined total for May and June was the driest since 1992.

Rainfall at Indianapolis was not evenly distributed throughout June. Nearly all of June's rain fell on 5 days during the month; 1st, 2nd, 24th, 26th and 28th. Less than one quarter of an inch of rain fell from the 3rd through the 23rd.

A few locations in central and particularly southern Indiana received above normal rainfall. Rain of 4 to 8 inches fell during June. Much of the HSA received between 1 and 4 inches of rain for the month. As a result, little flooding occurred in June. This was a drastic change from the past several years when high water was a frequent occurrence in either May and/or June.

What little river flooding that did occur during June affected portions of the Wabash River in western Indiana and portions of the White River in southwest Indiana. Flood crests were 1 foot or less above flood stage. Lowland flooding lasted only 1 to 2 days.

The first 90 degree day for the "Summer of 99" occurred on the 8th at Indianapolis. The last 90 degree at Indianapolis for the "Summer of 98" was on September 27th. The last time Indianapolis experienced a quicker return of 90 degrees from one summer to the next was from 1958 to 1959.

There have been 13 years with a quicker return of 90 degree temperatures for one season to the next since 1871. The quickest return to 90 degrees was in 1952 and the longest in 1960.

The "August" weather that arrived in Indiana on the 5th was replaced with refreshing, early fall weather the week of the 14th. Tropical weather returned by the 21st and remained through the 28th. June finished with pleasant weather. The monthly temperature averaged from near normal to about 2 degrees above normal across the state.

The largest rain during June occurred on the 1st and 2nd. Rain of 1 to more than 5 inches fell in much of Indiana. The second and last rain event of June occurred from the 24th to 28th. The heaviest rain of 3 to 5 inches was confined to southern Indiana during this 5 day period.

As a result of the generally dry weather during June, farmers were harvesting wheat only 1 day slower than the record set in the Drought of 1988. The combination of early harvest and generally adequate soil moisture was allowing farmers in much of Indiana the opportunity to double crop their wheat fields with soybeans.

The highest temperatures during June occurred from the 8th through 11th. Maximum temperatures were in the low and middle 90s. The warmest temperatures were in the drier areas on northern and southeast Indiana. The coolest temperatures occurred on the 18th in most areas. The minimum temperatures fell into upper 40s and lower 50s.

Precipitation fell on 9 to 12 days during June. Only southern and a few extreme northern Indiana locations had 2 or 3 days with an inch or more of rain. Most locations in central Indiana did not have any days with an inch or more of rain.

At the end of June, ground conditions were wet in southern Indiana and generally dry throughout central and northern Indiana. Almost all rivers and streams in the Indianapolis HSA had below normal flows.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPort, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

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NWS FORM E-5
NATIONAL

U.S. DEPARTMENT OF COMMERCE
OCEANIC AND

HYDROLOGIC SERVICE AREA:
ATMOSPHERIC ADMINISTRATION

NATIONAL WEATHER SERVICE

INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: July

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

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July was one of the warmest Julys on record for Indiana. Maximum temperatures reached into the upper 90s and low 100s across the state. Monthly temperatures averaged 4 to 5 degrees above normal. Most locations received below normal rainfall for the month.

July began with normal temperatures. Ninety degree weather arrived on the 3rd in central Indiana and continued through the 6th. Very pleasant weather returned on the 7th and continued through the 14th. The hot weather set in on the 15th and remained through the 31st. Maximum temperatures from the 29th through the 31st were in the upper 90s and low 100s across the state. From the 15th through the 31st temperatures in central Indiana remained above 65 degrees.

For Indianapolis this was the warmest July since 1983 and the 12th hottest July of record. The temperature at Indianapolis was 95 degrees or higher from the 29th through the 31st. The last time Indianapolis had 3 consecutive days with 95 degrees or higher was June 30 through July 2, 1991. July 1991 was also the last time much of the state experienced 100 degree heat.

Drought conditions developed in north central and northeast Indiana during July. Nearly all the month's precipitation in this area fell on the July 1st. Little rain occurred during the remainder of July in north central and northeast Indiana.

Much of central and southern Indiana fared somewhat better during July. Significant rain fell in portions of these areas on the 1st, 6th, 17th, 19th and 28th. Rainfall was spotty in

nature and not all locations received significant rain. Indianapolis and much of the state had a 10-day dry spell from the 7th through the 16th. Temperatures during this period were generally below normal.

The most significant rain during July in the Indianapolis HSA occurred late on the 17th and late on the 19th. Rain of more than 2 inches fell on both days in portions of west central Indiana. A few areas received over 4 inches from both events. The heavy rain on the 19th pushed the Eel River at Bowling Green and Raccoon Creek at Coxville to near bankfull levels. Both streams returned to low levels within a day.

Hot and very humid conditions settled in over Indiana by the 19th. Although Indianapolis only had 8 consecutive days of 90 degrees or higher temperatures, many areas of the state had 13 consecutive days of 90 degrees or higher weather during the last 2 weeks of July. Temperatures above 95 degrees on the 29th through the 31st caused stress on agricultural crops.

Monthly rainfall for July was below normal for most areas of Indiana. Monthly rainfall ranged from less than 1 inch to nearly 6 inches. Most areas received between 2 and 4 inches. Rainfall fell on 3 to 8 days during the month. Some locations had 1 day with an inch or more of rain.

Although Indianapolis received below normal rainfall for July, this was only the driest July at Indianapolis since 1997. July 1997 was the second driest of record at Indianapolis.

The highest temperatures during July occurred on the 30th and ranged from the upper 90s to low 100s. The coolest temperatures occurred on the 11th or 12th and were generally in the 50s. July 1999 had the most 90 degree days at Indianapolis since August 1995. Indianapolis experienced 16 days with 90 degree heat. For the remainder of Indiana, there were 14 to 19 days with 90 degrees or higher.

Near the end of July, electric utilities serving Indiana were struggling to meet the record power demand, rivers and streams were at low levels and most soils were dry to very dry throughout the Indianapolis HSA. As a result of the warm overnight temperatures, fruits and vegetables continued to mature 2 to 3 weeks early.

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INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

MONTH: August

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

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Following one of the warmest Julys of record, much of Indiana was treated to a cooler than normal August. Drought conditions during August relented somewhat in northern Indiana, but expanded in much of central and southern Indiana. Much of Indiana received below normal rainfall for August.

Maximum temperatures did not reach 90 degrees in northern and much of central Indiana during August. The last time that the Indianapolis area did not have a 90 degree day in August was in 1989. Temperatures did not reach 100 degrees in southern Indiana during August.

Monthly rainfall ranged from less than 1 inch in southwest Indiana to more than 6 inches in isolated areas of northern Indiana. Most locations received 1 to 3 inches of rain during August. Rainfall fell on 3 to 11 days during the month. Only a few locations had 1 day with an inch or more of rain.

Significant rains fell in northern Indiana on the 1st and 8th. Although coverage was incomplete much of northern Indiana received ½ to 3 inches of rain from each event.

The most significant rain for central Indiana occurred on the 13th. Portions of central Indiana received over an inch of rain. For much of central Indiana, this was the biggest rain for August.

The last rain event for August occurred from the 23rd through the 27th. Rain of 1 to nearly 3 inches fell in a narrow 5 to 15 mile wide band from Vincennes to Greensburg in southern Indiana. Much of northern Indiana received ½ to a locally 5 inches of

rain. The rainfall totals in the remainder of Indiana was less than $\frac{1}{2}$ of an inch.

August rainfall at Indianapolis was the 19th driest August of record and the driest since 1992. For the summer, Indianapolis received only 7.03 inches or about 60% of normal. Summer 1999 was the 20th driest of record and the driest since 1997. Monthly rainfall at Indianapolis has been below normal for 4 consecutive months.

Stream and river levels continued to fall in August. There was a slight response to local heavy rains on small streams, but little effect was seen on the larger rivers.

August began with above normal temperatures, but lower than July 31st. Near normal temperatures prevailed from the 2nd through the end of the August. Monthly temperatures averaged from 2 degrees below normal to $\frac{1}{2}$ degree above normal.

The average monthly temperature declines 2.2 degrees from July to August at Indianapolis. This August, the decline was 6.8 degrees, the greatest decline since 1986. The July to August average temperature decline in 1999 tied for the 5th largest of record.

The warmest temperatures of the month occurred on the 17th for much of Indiana. Maximum temperatures ranged from upper 80s in central and northern Indiana to mid to upper 90s in southern Indiana. Southern Indiana experienced 3 to 11 days with temperatures in the 90s. Minimum temperatures for August ranged from the upper 40s in much of eastern Indiana to 50s in the remainder of the state. The lowest temperatures for August generally occurred on the 15th and/or 31st.

Despite temperatures in the 90s on 11 days in southwest Indiana, the monthly average temperature was below normal. Dry soils allowed minimum temperatures to fall into the 50s and low 60s to offset the hot daytime temperatures.

At the end of August, rivers and streams were at low levels and most soils were dry to very dry throughout the Indianapolis HSA. Because of the warm summer and dry conditions, fall fruits and vegetables were to maturing 2 to 3 weeks early.

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NATIONAL WEATHER SERVICE

INDIANAPOLIS, INDIANA

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: September

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)

DATE: March 13, 2007

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September 1999 will be remembered for the Drought of 1999. The Drought of 1999 intensified in Indiana during much of September. Numerous wildfires broke out in Indiana as a result of the very dry conditions. Drought conditions eased somewhat when rain returned to many areas of Indiana near the end of the month. This was the most significant rain for much of the state in more than six weeks.

The only significant rain of the month did not occur until the evening of the 28th and morning of the 29th. Rain of 1 to nearly 4 inches fell north of a line from Terre Haute to Fort Wayne. South of a line from Vincennes to Richmond generally less than one half of an inch fell. The remainder of the state received from ½ to 1 ½ inches. This single event provided more than 90% of the monthly rainfall for many areas of the state.

Monthly rainfall totals ranged from one quarter of an inch to nearly 4 inches. Above normal monthly rainfall was confined to areas in west central and northern Indiana. The remainder of the state received below to much below normal rainfall. Rain fell on 4 to 5 days during September. Only locations in northern Indiana had 1 day with an inch or more of rain.

Indianapolis and much of Indiana did not set a record for the driest September of record. At Indianapolis, September 1999 became the 7th driest of record. Last September only 0.48 inches fell at Indianapolis for the 3rd driest September of record. This was only the second time since 1871 that 2 consecutive Septembers received less than an inch of rain. The last time this happened was in 1978 and 1979.

Indianapolis's rainfall for the months of August and September were the 4th driest of record. The last time August and September were drier was in 1982. Monthly rainfall at Indianapolis has been below normal for 5 consecutive months.

The Indianapolis airport has received only 62% of normal rainfall since May 1. The airport had 7 consecutive months of below normal rainfall in 1997.

The White River in southwest Indiana fell to critically low levels for the IPALCO plant at Petersburg. As a result, a small amount of water was released from Lake Monroe to augment the low flow. Numerous small streams dried up completely in the Indianapolis HSA. Very low lake levels brought an end to the boating season for many boaters. Winter draw down of Corps of Engineers reservoirs in northern Indiana kept the Wabash River above critically low levels.

September in much of the Indianapolis HSA began with above normal temperatures and temperatures as high as the warmest temperatures seen during all of August. The outflow from Hurricane Dennis brought dry, 90-degree weather for much of the Labor Day week.

After the 8th, temperatures would alternate between below normal to above normal every few days. This continued for the remainder of the month. As a result, monthly temperatures averaged between 1 degree below normal to 1 degree above normal across Indiana.

The warmest temperatures of the month occurred on the 4 or 5th and reached into the 90s across Indiana. After experiencing no 90-degree weather during August, central and northern Indiana saw 4 to 8 days during September. Lowest temperatures during September occurred on the 22nd and fell into the 30s.

Clear, dry conditions prevailed for much of September. As a result, diurnal temperature changes were often greater than the normal 22 degrees at Indianapolis. The greatest diurnal change of 41 degrees during the month occurred on the 11th. The last time September experienced a greater diurnal change was in 1953.

The daily temperature reached or exceeded 90 degrees 8 times during the month at Indianapolis. The last time this occurred was in 1991. When the temperature reached 90 degrees on the 28th, this was one degree shy of tying the record for the date. This 90 degree occurrence was 1 day later than the last 90 degree day in September 1998 and the latest 90-degree day in the year since October 3, 1954.

The only severe weather during September occurred on the evening of the 28th. A small tornado struck portions of Tippecanoe county. Thunderstorms dropped golf ball sized hail stones in portions of west central and north central Indiana. Because of the very dry conditions, no flash flooding occurred.

At the end of September, rivers and streams were at low levels and most soils were dry to very dry throughout the much of the Indianapolis HSA. As a result of the rain on the 28th and 29th, streams levels rose somewhat in northern and western Indiana.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPorte, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

Beginning December 1, 1994, the Wilmington, Ohio office assumed the Hydrologic Service Area of streams and rivers in the following east central and southeast Indiana counties: Dearborn, Fayette, Franklin, Ripley, Ohio, Switzerland, Union and Wayne. This includes most of the Whitewater River Watershed in Indiana.

Beginning September 1, 1995, the Louisville, Kentucky office assumed the Hydrologic Service Area of streams and rivers in the following south central Indiana counties: Orange, Washington, Scott, Jefferson, Crawford, Harrison, Floyd, and Clark. This includes the Blue River Watershed in south central, the Muscatatuck River Drainage in Jefferson County and most of the Lost River in south central Indiana.

Beginning February 1, 1996, the Louisville, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following south central and southwest Indiana counties: Dubois and Perry including the Anderson River along the Perry/Spencer county line.

Beginning February 1, 1996, the Paducah, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following southwest Indiana counties: Gibson, Pike, Posey, Spencer, Vanderburgh and Warrick. This includes the Wabash River in the New Harmony, Indiana area.

Beginning July 15, 1998, the North Webster, Indiana office assumed the Hydrologic Service Area of the streams and rivers in the following north central and northeast Indiana counties: Lagrange, Steuben, Noble, Dekalb, Whitley, Allen, Adams, Wells, Huntington, Wabash, Grant, Blackford and Jay. This includes the headwaters of the Wabash River, the Indiana portion of the St. Joseph, St. Marys and Maumee Rivers and the Salamonie, Eel and most of the Mississinewa Rivers.

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Wilmington, OH. 45177**

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Airport Corporate Headquarters
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U.S. DEPARTMENT OF COMMERCE
OCEANIC AND

INDIANAPOLIS, INDIANA

HYDROLOGIC SERVICE AREA:
ATMOSPHERIC ADMINISTRATION

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
YEAR: 1999

REPORT FOR:

MONTH: October

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

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The Drought of 1999 eased during October but did not disappear. Water levels in rivers, streams, lakes and reservoirs continued to diminish throughout October. The burning ban covering central and southern Indiana was lifted just prior to the onset of the most significant rain to fall in many areas of southern Indiana in 100 days.

The only significant rain to fall in many areas of central and southern Indiana during October occurred on the 8th and 9th. Rain of 1 to slightly over 3 inches fell. This single rain event represented 60 to 95% of the monthly rain received during October for this portion of Indiana.

Another dry pattern began on the 18th in central Indiana and continued through the end of October. This string of 14 consecutive days without rain ended on November 1st when 0.01 inch of rain fell at Indianapolis. Record to near record warmth at the end October and the lack of rain greatly increased the fire danger. A large wildfire occurred on the 29th in the Camp Atterbury area in northeast Brown and northwest Johnson counties as a result of arson.

Monthly temperature for October ranged from 1 degree below normal to 1 degree above normal across Indiana. Although the monthly average was near normal, October experienced large swings in temperatures in only a few days. The lowest temperature for many areas of Indiana occurred on the 24th or 25th. Three to four days later the warmest temperatures of the month occurred. Central Indiana experienced the warmest temperatures from October 28th through November 1st since 1950.

Monthly rainfall totals ranged from slightly over 1 inch in portions of northern Indiana to nearly 5 inches in portions of central Indiana. Most areas received 1 to 3 inches of rain during October. Monthly rainfall was below normal for most areas of Indiana. Rain fell on 2 to 9 days during October. Only locations in southern Indiana had 1 day with an inch or more of rain.

October was the 6th consecutive month with below normal rainfall at Indianapolis. The Indianapolis airport has received only 63% of normal rainfall since May 1. The airport had 7 consecutive months of below normal rainfall in 1997.

The warmest temperatures of the month occurred on the 28th or 29th across much of Indiana. Maximum temperatures ranged from upper 70s to lower 80s. Lowest temperatures during October occurred on the 24th or 25th and fell into the middle 20s to lower 30s. The temperature fell below 33 degrees 1 to 5 times during the month.

At the end of October, rivers and streams were at very low levels and most soils were dry to very dry throughout much of the Indianapolis HSA. Fire danger was once again high in most areas of the state.

Beginning October 3, 1994, the Chicago office assumed the Hydrologic Service Area of streams and rivers in the following northern Indiana counties: Lake, Porter, LaPorte, St. Joseph, Elkhart, Newton, Jasper, Starke, Marshall, Kosciusko, Benton, White, Pulaski and Fulton counties. This includes the following Indiana rivers: Kankakee, Iroquois, St. Joseph, Yellow and much of the Tippecanoe Rivers. Beginning July 15, 1998, the Chicago office transferred the following northern Indiana counties to North Webster, Indiana: LaPorte, St. Joseph, Elkhart, Starke, Marshall, Kosciusko, White, Pulaski and Fulton counties. This includes the St. Joseph, Yellow, much of the Tippecanoe and the headwaters of the Kankakee Rivers..

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Beginning September 1, 1995, the Louisville, Kentucky office assumed the Hydrologic Service Area of streams and rivers in the following south central Indiana counties: Orange, Washington, Scott, Jefferson, Crawford, Harrison, Floyd, and Clark. This includes the Blue River Watershed in south central, the Muscatatuck River Drainage in Jefferson County and most of the Lost River in south central Indiana.

Beginning February 1, 1996, the Louisville, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following south central and southwest Indiana counties: Dubois and Perry including the Anderson River along the Perry/Spencer county line.

Beginning February 1, 1996, the Paducah, Kentucky office assumed the Hydrologic Service Area of the streams and rivers in the following southwest Indiana counties: Gibson, Pike, Posey, Spencer, Vanderburgh and Warrick. This includes the Wabash River in the New Harmony, Indiana area.

Beginning July 15, 1998, the North Webster, Indiana office assumed the Hydrologic Service Area of the streams and rivers in the following north central and northeast Indiana counties: Lagrange, Steuben, Noble, Dekalb, Whitley, Allen, Adams, Wells, Huntington, Wabash, Grant, Blackford and Jay. This includes the headwaters of the Wabash River, the Indiana portion of the St. Joseph, St. Marys and Maumee Rivers and the Salamonie, Eel and most of the Mississinewa Rivers.

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HYDROLOGIC SERVICE AREA:
ATMOSPHERIC ADMINISTRATION

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
1999

REPORT FOR:

MONTH: November

YEAR:

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

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The Drought of 1999 re-intensified during November as much of Indiana experienced one the warmest and driest Novembers of record. Most of the state received less than an inch of rain and temperatures were 4 to 6 degrees above normal. Water levels in rivers, streams, lakes and reservoirs continued to diminish throughout November. Wildfires once again returned to many areas of southern and central Indiana. Local burning bans covered much of central and southern Indiana.

Monthly rainfall totals ranged from less than one half of an inch to slightly over 2 inches. The southeast portion of Indiana received the most rain while the southwest and west central sections received the least. Monthly rainfall varied from less than 20% to about 75% of normal.

The little rain at the very beginning of November ended a 14-day dry spell at Indianapolis. A 16-day dry spell began on the 3rd and continued through the 18th at Indianapolis. This equaled the 16-day dry spell of late August and middle of September.

There were no significant rains in much of the Indianapolis HSA during November. Portions of northern Indiana received about an inch of rain on the 1st, southeast Indiana on the 2nd and 3rd and south central Indiana on the 25th and 26th. Most locations did not receive an inch of rain in a day or even the month.

Wildfires during November were generally in forested and brushy areas. Almost all of the crops had been harvested by early November. Two peat bogs fires continued at the end of the month. Peat bog fires are difficult to extinguish because they burn underground,

Monthly temperatures for November ranged from 4 to nearly 6 degrees above normal across Indiana. Most locations broke at least one daily maximum record during November. Central Indiana experienced its 4th warmest November of record and the warmest since 1931. The warmest day of November was the 1st and the coldest was the 30st for most areas of Indiana. Maximum temperatures were in the upper 70s and minimum temperatures were in the lower to middle 20s. In central Indiana, there were only 8 days where the average daily temperature was below normal.

Many locations in the Indianapolis HSA received less than an inch of rain during November. Rain fell on 4 to 8 days during the month. For Indianapolis this was the 3rd driest November of record and driest November since 1917. This was only the 6th time since 1871 that Indianapolis had received less than an inch of rain during November.

November was the 7th consecutive month with below normal rainfall at Indianapolis. This last occurred in 1997. The following public information statement illustrates the dryness at the Indianapolis airport during 1999.

...1999 A VERY DRY YEAR IN INDIANAPOLIS THROUGH NOVEMBER...

AFTER BEGINNING AS A VERY WET YEAR...1999 HAS DRIED OUT QUITE RAPIDLY. AT THE END OF NOVEMBER...1999 IS PROVING TO BE A VERY DRY YEAR FOR THE INDIANAPOLIS AIRPORT.

A FEW SIGNIFICANT DRY MILESTONES INCLUDE...THE 3RD DRIEST NOVEMBER OF RECORD...2ND DRIEST AUTUMN OF RECORD AND THE DRIEST AUGUST THROUGH NOVEMBER PERIOD ON RECORD. THE YEAR 1999 HAS RANKED AS ONE OF THE TOP 6 DRIEST PERIODS ENDING WITH NOVEMBER SINCE THE BEGINNING OF FEBRUARY.

THE FOLLOWING TABLE IS A RANKING OF THE RAINFALL IN 1999 GOING BACK MONTH BY MONTH AND ENDING WITH NOVEMBER.

Period	Rank	Amount	Per Cent Normal	Driest Since	Driest Year	Driest Amount
November	3	.69	21.4	1917	1904	.11
Oct-Nov	6	2.51	42.8	1965	1904	1.15
Sep-Nov	2	3.26	37.3	1963	1963	2.59
Aug-Nov	1	4.76	38.5	****	1999	4.76
Jul-Nov	2	7.72	45.8	1908	1908	7.56
Jun-Nov	2	10.29	50.6	1908	1908	8.61
May-Nov	4	14.04	57.7	1964	1930	12.91
Apr-Nov	4	18.13	64.7	1954	1954	16.80
Mar-Nov	2	19.71	61.9	1930	1930	18.76

Feb-Nov		3		23.28		67.9		1954		1930		21.52
Jan-Nov		15		29.63		81.0		1988		1940		25.75

**** OLD RECORD FROM 1963 OF 4.81 INCHES WAS BROKEN

Little or no snow fell during November in the Indianapolis HSA. This was the 2nd consecutive November that Indianapolis did not receive even a trace of snow. This has occurred only 5 times since November 1884, but 4 times during the 1990s.

At the end of November, rivers and streams were at very low levels and most soils were dry to very dry throughout the Indianapolis HSA. Fire danger was once again high in most areas of the state. Two peat bog fires continued at month's end.

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HYDROLOGIC SERVICE AREA:
ATMOSPHERIC ADMINISTRATION

MONTHLY REPORT OF RIVER AND
FLOOD CONDITIONS
1999

REPORT FOR:

MONTH: December YEAR:

TO: Hydrometeorological Information Center
NWS/Office of Hydrology, W/OH12x1
1325 East-West Highway, Room 7128
Silver Spring MD. 20910

SIGNATURE:

(In Charge of Hydrologic Service Area)
DATE: March 13, 2007

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The Drought of 1999 eased again for much of Indiana during December. Monthly rainfall ranged from less than 2 inches in portions of northern Indiana to more than 5 inches in southern Indiana. Rainfall was above normal for southern Indiana, but remained below normal for central and northern Indiana. Water levels in rivers, streams, lakes and reservoirs remained low throughout December. Wildfires subsided and local burning bans were lifted by the middle of December.

More than 80% of December's rain fell during the first half of the month. Significant rainfall events occurred on the 5th, 10th, 12th and 14th. Rain of ½ to possibly 2 inches fell in portions of central and southern Indiana. Areas in southern Indiana near the Ohio River received the most rain from these events.

While little rainfall occurred after the 17th, most of the monthly snow occurred during this period. Once again, south central Indiana was favored and received 3 to 5 inches of snow on the 24th. Most remaining areas of Indiana received only 1 or 2 inches of snow. Christmas in much of Indiana was white even though many areas had only a trace of snow on the ground.

Temperatures generally averaged above normal from the 1st through the 20th. When winter officially arrived, so did winter weather. Temperatures generally remained below normal through the 28th. Above normal temperatures prevailed at the end of December.

Monthly temperatures averaged 1 ½ to 3 ½ degrees above normal. This was the 4th consecutive month with above normal temperatures in central Indiana. For Indianapolis, the year 1999 was the 7th

warmest of record.

The highest temperature during December occurred on the 4st and the coldest temperature was on Christmas. Maximum temperatures were in the upper 50s and lower 60s and minimum temperatures were in the single digits. Temperatures fell below 33 degrees on 22 to 25 days and remained below 33 degrees on 2 to 9 days. Only in a few isolated areas did temperatures fall to zero or below. In central Indiana, this was the coldest Christmas since 1990.

Measurable precipitation fell on 10 to 15 days during the month. Locations in southern Indiana had 2 to 3 days with an inch or more of rain. For central and northern Indiana only some locations had 1 day with an inch or more of rain.

For Indianapolis this was the 8th consecutive month with below normal rainfall. The last time this occurred was from May 1, 1964 to December 31, 1964. The year 1999 was the 14th driest of record at Indianapolis and the driest since 1994.

Total monthly snow during December in the Indianapolis HSA ranged from 2 inches to 5 inches. Snow fall was above normal in south central Indiana and below normal in remaining locations.

A pollutant killed more than 80,000 fish in the White River from Anderson to the north side of Indianapolis during the 2nd half of December. Very low water flow and cold water temperatures were possible contributing factors to this large fish kill.

At the end of December, rivers and streams were at very low levels and most soils were dry throughout the Indianapolis HSA.

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