

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONSDATE:
June 29, 2009TO: NATIONAL WEATHER SERVICE (W/OS31)
HYDROMETEOROLOGICAL INFO CENTER
1325 EAST-WEST HIGHWAY, RM 13468
SILVER SPRING, MD 20910SIGNATURE:
Daniel K. Cobb, MIC
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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 (WSOM E-41).

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

Summary

No significant flooding occurred during the month of May. Minor river flooding carried over from April into May on the Grand, Maple, and Thornapple Rivers in our Hydrologic Service Area (HSA). River flood advisories were issued for several rivers in our HSA when river levels were forecast to exceed bankfull but not reach flood stage. Areal flood advisories were issued for Eaton, Calhoun, Ingham and Jackson Counties. Spotters reported heavy rain, elevated stream levels, and minor ponding of water over roads during the areal flood advisory events. No lives were lost and no significant property damage occurred during these flood events.

Flood Conditions

The following river flood advisories carried over from April:

- Grand River at Ada, Michigan
- Grand River at Grand Rapids, Michigan
- Sycamore Creek at Holt, Michigan
- Looking Glass River near Eagle, Michigan
- Flat River near Smyrna, Michigan
- Thornapple River near Caledonia, Michigan
- Kalamazoo River near New Richmond, Michigan
- Kalamazoo River at Comstock, Michigan
- Pere Marquette River near Scottville, Michigan
- White River near Whitehall, Michigan
- Pine River at Alma, Michigan
- Chippewa River near Mt. Pleasant, Michigan
- Little Muskegon River near Morley, Michigan

The following river flood warnings carried over from April:

- Grand River at Lowell, Michigan
- Grand River near Comstock Park, Michigan
- Maple River at Maple Rapids, Michigan
- Thornapple River above Hastings, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Robinson Township, Michigan

Friday, May 1st

Hydrologic products issued the first week in May were primarily due to the carryover of flooding from April. Fair and dry weather was anticipated through the weekend with high pressure in control.

At 10:52 AM EDT, river flood warnings were cancelled for the following rivers:

- Grand River at Lowell, Michigan (fell below flood stage)
- Thornapple River near Hastings, Michigan (fell below flood stage)
- Portage River near Vicksburg, Michigan (crested below flood stage)

At 11:32 AM EDT, river flood advisories were cancelled for the following rivers:

- Sycamore Creek at Holt, Michigan
- Kalamazoo River at Comstock, Michigan
- White River above Whitehall, Michigan
- Pine River at Alma, Michigan

At 11:32 AM EDT, a river flood advisory was issued for the following rivers:

- St. Joseph River near Burlington, Michigan
- Muskegon River near Croton, Michigan

At 9:57 PM EDT, a river flood advisory was issued for the following rivers:

- Red Cedar River at East Lansing, Michigan
- Rogue River below Rockford, Michigan

At 10:40 PM EDT, river flood advisories were cancelled for the following rivers:

- Grand River at Ada, Michigan
- Looking Glass River near Eagle, Michigan
- Flat River near Smyrna, Michigan
- Thornapple River near Caledonia, Michigan
- St Joseph River at Burlington, Michigan
- Chippewa River below Mt Pleasant, Michigan

Saturday, May 2nd

At 10:47 AM EDT, river flood advisories were cancelled for the following rivers:

- Rogue River below Rockford, Michigan
- Kalamazoo River near New Richmond, Michigan
- Little Muskegon River above Morley, Michigan

At 10:47 AM EDT, a river flood advisory was issued for the Portage River near Vicksburg, Michigan.

At 10:22 PM EDT, river flood advisories were cancelled for the following rivers:

- Grand River at Grand Rapids, Michigan
- Red Cedar river at East Lansing, Michigan

Sunday, May 3rd

At 11:02 PM EDT, river flood advisories were cancelled for the following rivers:

- Portage River near Vicksburg, Michigan
- Muskegon River near Croton, Michigan

Monday, May 4th

At 9:34 AM EDT, the river flood advisory was cancelled for the Pere Marquette River near Scottville, Michigan.

Wednesday, May 6th

At 10:34 AM EDT, the river flood warning was cancelled for the Grand River at Robinson Township, Michigan, when the river fell back below flood stage.

Thursday, May 7th

A weak cold front brought some light rain showers and isolated thunderstorms into the area. Another system was forecast to bring a chance for rain from late Friday night through Saturday afternoon.

At 7:23 AM EDT, the river flood warning was cancelled for the Grand River at Comstock Park, Michigan, when the river fell back below flood stage.

Saturday, May 9th

The first significant rainfall event of the month came in during the early morning hours on Saturday the 9th as a cold front moved across the area from the northwest.

Wednesday, May 13th

Forecast called for the potential of severe weather and heavy rain today through tonight.

At 9:25 AM EDT, a river flood advisory was issued for the Grand River at Jackson, Michigan.

At 9:58 PM EDT, river flood advisories were issued for the following rivers:

- Grand River at Ionia, Michigan
- Maple River at Maple Rapids, Michigan
- Pere Marquette River near Scottville, Michigan

At 11:18 PM EDT, a flood advisory for urban and small streams was issued for Muskegon, Newaygo, and Oceana Counties.

Thursday, May 14th

Showers and thunderstorms yesterday and overnight produced one to two inches of rainfall over the area. The next chance of rain will be Friday night into Saturday morning when another frontal system impacts the region.

At 10:13 AM EDT, the river flood advisory for the Grand River at Jackson, Michigan, was cancelled and river flood advisories were issued for the following rivers:

- Sycamore Creek near Holt, Michigan
- White River near Whitehall, Michigan

At 9:42 PM EDT, an areal flood warning was issued for urban and small streams near Baldwin, Michigan, in Lake County.

At 10:12 PM EDT, the river flood advisory for the Maple River at Maple Rapids, Michigan, was cancelled.

Friday, May 15th

A warm front was forecast to move through the area with the possibility of heavy rain and flooding that night as the next frontal system approached from the west.

At 10:42 AM EDT, the areal flood warning for urban and small streams near Baldwin, Michigan, in Lake County was cancelled.

At 10:55 AM EDT, a river flood watch was issued for the Portage River near Vicksburg, Michigan.

At 11:05 AM EDT, river flood advisories were issued for the following rivers:

- Grand River at Jackson, Michigan
- Looking Glass River near Eagle, Michigan
- Maple River at Maple Rapids, Michigan
- Thornapple River above Hastings, Michigan

At 3:40 PM EDT, an areal flood watch was issued for our entire HSA with the headline... "Heavy Rain and Flooding Possible Tonight".

At 11:20 PM EDT, the river flood watch was upgraded to a river flood warning for the Portage River near Vicksburg, Michigan.

At 11:25 PM EDT, river flood advisories were issued for the following rivers:

- Kalamazoo River at Marshall, Michigan
- St Joseph River at Burlington, Michigan

At 11:35 PM EDT, the river flood advisory was cancelled for the White River near Whitehall, Michigan, and a river flood advisory was issued for the Flat River near Smyrna, Michigan.

Saturday, May 16th

The warm front that moved through the area overnight resulted in one to two and a half inches of rainfall over the southeastern portion of our HSA.

At 1:11 AM EDT, a flood advisory was issued for urban and small streams for Calhoun, Ingham, and Jackson Counties.

At 2:39 AM EDT, a river flood warning was issued for the Grand River at Jackson, Michigan.

At 2:59 AM EDT, the river flood advisory was cancelled for the Grand River at Jackson, Michigan.

At 3:42 AM EDT, the areal flood watch was cancelled for our entire HSA.

At 6:00 AM EDT, the areal flood advisory for urban and small streams for Calhoun, Ingham, and Jackson Counties was allowed to expire.

At 9:31 AM EDT, the river flood warning for the Grand River at Jackson, Michigan, was cancelled when the river crested at 13.81 feet, 0.19 of a foot below its flood stage of 14 feet.

At 10:56 AM EDT, the river flood warning was cancelled for the Portage River near Vicksburg, Michigan, when the river crested below flood stage.

At 11:19 AM EDT, river flood advisories were cancelled for the following rivers:

- Maple River at Maple Rapids, Michigan
- Flat River near Smyrna, Michigan
- Thornapple River near Hastings, Michigan

At 5:55 PM EDT, the river flood advisory was cancelled for the Looking Glass River near Eagle, Michigan.

Sunday, May 17th

At 2:58 PM EDT, the river flood advisory was cancelled for Sycamore Creek near Holt, Michigan.

At 9:46 PM EDT, the river flood advisory was cancelled for the St. Joseph River near Burlington, Michigan.

Monday, May 18th

At 10:05 AM EDT, river flood advisories were cancelled for the following rivers:

- Grand River at Ionia, Michigan
- Kalamazoo River at Marshall, Michigan
- Pere Marquette River near Scottville, Michigan

Wednesday, May 27th

Another front moved through the area resulting in scattered thunderstorms which deposited a quarter to an inch and a half of rainfall over the area.

At 5:33 PM EDT, an areal flood advisory was issued for Eaton and Ingham Counties.

At 10:34 PM EDT, a river flood advisory was issued for the Grand River at Ionia, Michigan.

Thursday, May 28th

At 9:28 AM EDT, the areal flood advisory was cancelled for Eaton and Ingham Counties.

Friday, May 29th

At 10:41 AM EDT, the river flood advisory was cancelled for the Grand River at Ionia, Michigan.

Flood Stage Report

The river forecast points that exceeded flood stage during the month of May were the direct result of high water carried over from the month of April.

River Conditions

River levels were above normal across our HSA for the entire month of May. The end of the month percentage of normal flow for selected rivers is listed below:

<u>Location</u>	<u>River</u>	<u>% of Normal</u>
Whitehall	White	135
Evert	Muskegon	131
Mt. Pleasant	Chippewa	135
Lansing	Grand	257
Grand Rapids	Grand	182
East Lansing	Red Cedar	250
Hastings	Thornapple	182
Battle Creek	Battle Creek	133
Comstock	Kalamazoo	150

General Hydrologic Information

May 2009 will be remembered for near normal temperatures and below normal precipitation for most of our area except for the Lansing and Jackson, Michigan areas. May precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan, were 2.65, 4.08, and 1.65 inches, respectively. Precipitation totals for the month at these three sites were 0.70 of an inch below normal at Grand Rapids, 1.37 inches above normal at Lansing, and 1.30 inches below normal at Muskegon, Michigan. Yearly precipitation totals were 2.93 inches above normal for Grand Rapids, 5.83 inches above normal for Lansing, and 3.87 inches above normal for Muskegon, Michigan.

No Snow was recorded during the month of May at Grand Rapids, Lansing, or Muskegon, Michigan.

Temperatures for the month of May were near normal at Grand Rapids, Lansing, and Muskegon, with average monthly departures of +0.2, +0.1 and -0.1 degrees Fahrenheit, respectively.

Hydrologic Products issued this month:

- 3 Areal Flood Watches (ARBFFAGRR)
- 2 River Flood Watches (ARBFFAGRR)
- 2 River Flood Warnings (ARBFLWGRR)
- 17 River Flood Statements (ARBFLSGRR)
- 1 Areal Flood Warning (ARBFLWGRR)
- 30 River Flood Advisories (ARBFLSGRR)
- 8 Areal Flood Advisories (ABRFLSGRR)
- 51 Hydrologic Statements (ARBRVSGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summaries (ARBRVDGRR)
- 1 Hydrologic Outlook (ARBESFGRR)