

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

REPORT FOR (MONTH & YEAR):
May 2010

DATE:

June 28, 2010

TO: NATIONAL WEATHER SERVICE (W/OS31)
HYDROMETEOROLOGICAL INFO CENTER
1325 EAST-WEST HIGHWAY, RM 13468
SILVER SPRING, MD 20910

SIGNATURE:
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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

A flash flood occurred in Kent County near Rockford, Michigan, on May 31st. The flash flooding caused multiple roads to be washed out, ripped out culverts, and flooded several homes. One home had over 8 feet of standing water in its basement. The water in the basement was from overland flow that broke out a basement window and filled the recently finished basement. Minor flooding also occurred along the Rogue River near Rockford, Michigan, on May 31st. River flood advisories (river forecast to exceed bankfull but not flood stage) were issued for 15 river forecast points during the month of May. Of the 15 river forecast points, 10 exceeded bankfull stage. Urban and small stream flood advisories were issued for 14 counties during the month of May.

Flood Conditions

Friday, May 7th

At 10:20 AM EDT, a river flood advisory was issued for Sycamore Creek near Holt, Michigan. River flood advisories are issued whenever the river is forecast or observed to exceed bankfull, but not flood stage.

Saturday, May 8th – Monday, May 10th

A river flood advisory continues for Sycamore Creek near Holt, Michigan. At 4:10 AM EDT, Monday, May 10th, the hydrology section of the Area Forecast Discussion mentioned the following: "Area rivers and streams remain at or slightly above normal levels as of early this morning. The southeast corner of the area is where the above normal levels are due to the heavier rains late last week. River levels are most certain to increase significantly over the next week across the entire area. Rainfall amounts of 1 to 2 inches look very likely across most areas from late tonight into Tuesday night. Then another 1 to 2 inches is very possible from Wednesday night through Thursday night across most of the area. If all of this rainfall comes to fruition...we will be looking at many river flood advisories and even some river flood warnings will be possible. This will continue to be monitored."

Tuesday, May 11th

At 11:47 AM EDT, the river flood advisory continues for Sycamore Creek near Holt, Michigan, and river flood advisories were issued for the Grand River at Ionia, Michigan, and the St. Joseph River at Burlington, Michigan.

At 9:57 PM EDT, the river flood advisories were cancelled for the Grand River at Ionia, Michigan, and Sycamore Creek near Holt, Michigan. The river flood advisory continues for the St. Joseph River at Burlington, Michigan.

Wednesday, May 12th

At 10:43 AM EDT, the river flood advisory continues for the St. Joseph River at Burlington, Michigan.

At 3:58 PM EDT, a flood watch was issued for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties from 2 AM EDT Thursday through late Thursday night.

At 4:35 PM EDT, the river flood advisory continues for the St. Joseph River at Burlington, Michigan, and river flood advisories were issued for the following rivers:

- Grand River at Jackson, Michigan
- Grand River at Eaton Rapids, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Red Cedar River above Williamston, Michigan
- Red Cedar River at East Lansing, Michigan
- Looking Glass River near Eagle, Michigan
- Maple River at Maple Rapids, Michigan
- Kalamazoo River at Marshall, Michigan
- Kalamazoo River near New Richmond, Michigan

At 4:38 PM EDT, a river flood advisory was issued for the Thornapple River near Hastings, Michigan.

At 9:50 PM EDT, the flood watch continues for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties from 2 AM EDT Thursday through late Thursday night.

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

- Grand River at Jackson, Michigan
- Grand River at Eaton Rapids, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Red Cedar River above Williamston, Michigan
- Red Cedar River at East Lansing, Michigan
- Looking Glass River near Eagle, Michigan
- Maple River at Maple Rapids, Michigan
- Kalamazoo River at Marshall, Michigan
- Kalamazoo River near New Richmond, Michigan
- Thornapple River near Hastings, Michigan
- St. Joseph River at Burlington, Michigan

At 11:01 PM EDT, a river flood advisory was issued for the Portage River near Vicksburg, Michigan.

Thursday, May 13th

At 3:15 AM EDT, the flood watch continues for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties through late tonight.

At 10:36 AM EDT, the flood watch continues for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties through late tonight.

At 11:30 AM EDT, river flood advisories continued for the following rivers:

- Grand River at Jackson, Michigan
- Grand River at Eaton Rapids, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Red Cedar River above Williamston, Michigan
- Red Cedar River at East Lansing, Michigan
- Looking Glass River near Eagle, Michigan
- Maple River at Maple Rapids, Michigan
- Kalamazoo River at Marshall, Michigan
- Kalamazoo River near New Richmond, Michigan
- Thornapple River near Hastings, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

At 2:25 PM EDT, a flood advisory for urban and small streams was issued for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, and Van Buren Counties until 2:15 PM EDT Friday.

At 3:39 PM EDT, the flood watch continues for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties until 2 AM EDT Friday.

At 7:28 PM EDT, the flood watch was cancelled for Calhoun, Clinton, Eaton, Ingham, Ionia, Jackson, Allegan, Barry, Kalamazoo, Kent, Ottawa and Van Buren Counties (watch replaced with flood advisory).

At 9:41 PM EDT, river flood advisories were cancelled for the following rivers:

- Grand River at Jackson, Michigan
- Grand River at Eaton Rapids, Michigan
- Red Cedar River above Williamston, Michigan
- Kalamazoo River near New Richmond, Michigan

and river flood advisories continue for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Red Cedar River at East Lansing, Michigan
- Looking Glass River near Eagle, Michigan
- Maple River at Maple Rapids, Michigan
- Kalamazoo River at Marshall, Michigan
- Thornapple River near Hastings, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

At 10:06 PM EDT, the flood advisory for urban and small streams was cancelled for Calhoun, Eaton, Ingham, Jackson, Kalamazoo, and Van Buren Counties and remained in effect for Clinton, Ionia, Allegan, and Barry Counties until 2:15 PM EDT Friday.

Friday, May 14th

At 8:26 AM EDT, the river flood advisory was cancelled for the Looking Glass River near Eagle, Michigan.

At 9:05 AM EDT, the flood advisory for urban and small streams was cancelled for Barry and Clinton Counties and remained in effect for Ionia and Allegan Counties until 2:15 PM EDT.

At 11:13 AM EDT, river flood advisories were cancelled for the following rivers:

- Red Cedar River at East Lansing, Michigan
- Thornapple River near Hastings, Michigan

and river flood advisories continue for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- Kalamazoo River at Marshall, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

and river flood advisories were issued for the following rivers:

- Grand River at Lowell, Michigan
- Grand River at Comstock Park, Michigan

At 1:57 PM EDT, the flood advisory for urban and small streams was cancelled for Allegan and Ionia Counties.

At 4:31 PM EDT, the river flood advisory for the Kalamazoo River at Marshall, Michigan, was cancelled.

At 9:31 PM EDT, river flood advisories continued for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Lowell, Michigan
- Grand River at Comstock Park, Michigan

Saturday, May 15th

River flood advisories continued for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Lowell, Michigan
- Grand River at Comstock Park, Michigan

Sunday, May 16th

At 10:48 AM EDT, the river flood advisory was issued for the Kalamazoo River near New Richmond, cancelled for the Grand River at Comstock Park, Michigan, and continued for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Lowell, Michigan

At 8:53 PM EDT, the river flood advisories continued for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Lowell, Michigan
- Kalamazoo River near New Richmond, Michigan

Monday, May 17th

At 11:18 AM EDT, the river flood advisory was cancelled for Sycamore Creek near Holt, Michigan, and continued for the following rivers:

- Grand River at Ionia, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Kalamazoo River near New Richmond, Michigan

At 9:02 PM EDT the river flood advisory was cancelled for the Kalamazoo River near New Richmond, Michigan, and continued for the following rivers:

- Grand River at Ionia, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Tuesday, May 18th

River flood advisories continued for the following rivers:

- Grand River at Ionia, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Wednesday, May 19th

River flood advisories continued for the following rivers:

- Grand River at Ionia, Michigan
- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Thursday, May 20th

At 10:03 AM EDT, the river flood advisory was cancelled for the Grand River at Ionia, Michigan. River flood advisories continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Friday, May 21st

River flood advisories continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

At 6:13 PM EDT, a flood advisory was issued for urban and small streams for Jackson County until 9:15 PM EDT.

At 8:05 PM EDT, the flood advisory continued for urban and small streams for Jackson County until 9:15 PM EDT.

At 9:14 PM EDT, the flood advisory for urban and small streams for Jackson County was allowed to expire.

At 10:26 PM EDT, a flood advisory was issued for urban and small streams for Jackson County until 10:15 AM EDT Saturday.

At 11:17 PM EDT, a river flood advisory was issued for the Grand River at Jackson, Michigan, and continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Saturday, May 22nd

At 4:52 AM EDT, the flood advisory for urban and small streams continued for Jackson County until 10:15 AM EDT Saturday.

At 10:21 AM EDT, a flood advisory was issued for urban and small streams for Southeastern Jackson County until 10:15 PM EDT Saturday.

At 11:13 AM EDT, the river flood advisory was cancelled for the Grand River at Jackson, Michigan and continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

River flood advisories were issued for the following rivers:

- Grand River at Ionia, Michigan
- Sycamore Creek near Holt, Michigan
- Kalamazoo River at Marshall, Michigan

At 10:09 PM EDT, the flood advisory for urban and small streams for Southeastern Jackson County was allowed to expire.

At 10:30 PM EDT, river flood advisories continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek near Holt, Michigan
- Kalamazoo River at Marshall, Michigan

Sunday, May 23rd

At 9:03 AM EDT, the river flood advisories were cancelled for the Kalamazoo River at Marshall and the St. Joseph River at Burlington, Michigan, and continued for the following rivers:

- Maple River at Maple Rapids, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek near Holt, Michigan

At 10:53 PM EDT, the river flood advisory was issued for the St. Joseph River at Burlington, Michigan, cancelled for the Maple River at Maple Rapids, Michigan, and continued for the following rivers:

- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek near Holt, Michigan

Monday, May 24th

At 10:50 AM EDT, river flood advisories continue for the following rivers:

- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan
- Sycamore Creek near Holt, Michigan

At 9:40 PM EDT, the river flood advisory was cancelled for Sycamore Creek near Holt, Michigan, and continued for the following rivers:

- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan

Tuesday, May 25th

At 10:22 AM EDT, river flood advisories continue for the following rivers:

- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan
- Grand River at Ionia, Michigan

At 9:24 PM EDT, the river flood advisory was cancelled for the Grand River at Ionia, Michigan, and continued for the following rivers:

- St. Joseph River at Burlington, Michigan
- Portage River near Vicksburg, Michigan

Wednesday, May 26th

At 10:24 AM EDT, the river flood advisory was cancelled for the Portage River near Vicksburg, Michigan, and continued for the St. Joseph River at Burlington, Michigan.

At 4:29 PM EDT, a flood advisory for urban and small streams was issued for portions of Lake and Newaygo Counties until 10:30 PM EDT.

At 6:36 PM EDT, a flood advisory for urban and small streams was issued for central Kent County until 9:30 PM EDT.

At 8:54 PM EDT, the river flood advisory continued for the St. Joseph River at Burlington, Michigan.

At 9:09 PM EDT, the flood advisory for urban and small streams was cancelled for Lake and Newaygo Counties.

At 9:25 PM EDT, the flood advisory for urban and small streams was allowed to expire for Kent County.

Thursday, May 27th - Sunday, May 30th

A river flood advisory continued for the St. Joseph River at Burlington, Michigan.

Monday, May 31st

At 10:03 AM EDT, the river flood advisory continued for the St. Joseph River at Burlington, Michigan.

At 2:31 PM EDT, a flood advisory for urban and small streams was issued for portions of Montcalm, Ionia, and Kent Counties until 5:30 PM EDT.

At 3:52 PM EDT, the flood advisory for urban and small streams was extended for portions of Montcalm, Ionia, and Kent Counties until 9:30 PM EDT.

At 4:00 PM EDT, a flash flood warning was issued for portions of Kent County until 10:00 PM EDT.

At 4:08 PM EDT, the flood advisory for urban and small streams was cancelled for Ionia and Kent Counties (Kent County upgraded to a flash flood warning) and remained in effect for Montcalm County until 9:30 PM EDT.

At 5:41 PM EDT, the flood advisory for urban and small streams was cancelled for Montcalm County.

At 6:34 PM EDT, a flood advisory for urban and small streams was issued for Jackson County until 12:30 AM EDT Tuesday.

At 6:34 PM EDT, a river flood warning was issued for the Rogue River near Rockford, Michigan.

At 8:05 PM EDT, the flash flood warning continued for Kent County until 10:00 PM EDT. Law enforcement reported that Childsdale Avenue was washed out and impassable.

At 8:20 PM EDT, a river flood advisory was issued for the Grand River at Jackson, Michigan.

At 8:27 PM EDT, the river flood warning for the Rogue River near Rockford, Michigan was cancelled and downgraded to a river flood advisory.

At 8:29 PM EDT, the flash flood warning continued for Kent County until 10:00 PM EDT. The media reported a section of Childsdale Avenue, South of Rockford, Michigan, washed out. English Avenue, North of West River Drive, was flooded with part of the road washed away. Cars were stalled on Plainfield Avenue (water to a depth of 3 feet covered the road) between Rupert Street and 4 Mile Road.

At 8:50 PM EDT, the river flood advisory continued for the St. Joseph River at Burlington, Michigan.

At 9:12 PM EDT, the flood advisory for urban and small streams was cancelled for Jackson County.

At 9:26 PM EDT, the flash flood warning for Kent County was cancelled.

The river flood advisory for the St. Joseph River at Burlington, Michigan continued into June.

In summary, the following rivers exceeded bankfull during the month of March:

- Grand River at Ionia, Michigan
- Grand River at Jackson, Michigan
- Sycamore Creek at Holt, Michigan
- Maple River at Maple Rapids, Michigan
- Thornapple River above Hastings, Michigan
- St Joseph River at Burlington, Michigan
- Looking Glass River near Eagle, Michigan
- Rogue River below Rockford, Michigan
- Kalamazoo River near New Richmond, Michigan
- Portage River near Vicksburg, Michigan

Flood Stage Report

Only one river exceeded flood stage during the month of May.

The Rogue River near Rockford, Michigan, with a flood stage of 8.0 feet, rose above flood stage around 3:15 PM EDT on May 31st, crested at 8.43 feet at 4:00 PM EDT on May 31st, and fell back below flood stage around 5:00 PM EDT on May 31st.

River Conditions

River levels by the end of May were below normal for our more Northern rivers and above normal for our Central (Grand River Basin) and Southern (Kalamazoo River Basin) rivers in our HSA. 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>
Scottville	Pere Marquette	84
Whitehall	White	82
Ewart	Muskegon	55
Mt. Pleasant	Chippewa	183
Lansing	Grand	134
Grand Rapids	Grand	163
East Lansing	Red Cedar	120
Hastings	Thornapple	113
Battle Creek	Battle Creek	115
New Richmond	Kalamazoo	116

General Hydrologic Information

May 2010 had near to above normal precipitation and above normal temperatures.

May precipitation totals at Grand Rapids, Lansing, and Muskegon, Michigan were 3.80, 4.18, and 3.02 inches, respectively. Precipitation totals for the month at these three sites were 0.45 of an inch above normal at Grand Rapids, 1.47 inches above normal at Lansing, and 0.07 of an inch above normal at Muskegon, Michigan. Yearly precipitation totals were 1.56 inches below normal for Grand Rapids, 1.86 inches below normal for Lansing, and 2.88 inches below normal for Muskegon, Michigan.

Temperatures for the month of May were above normal at Grand Rapids, Lansing, and Muskegon, Michigan, with average monthly departures of +3.5, +3.6 and +3.7 degrees Fahrenheit, respectively.

Hydrologic Products issued this month:

- 6 Flood Watches (ARBFFAGRR)
- 1 Flash Flood Warning (ABRFFWGRR)
- 3 Flash Flood Statements (ARBFFSGRR)
- 1 River Flood Warning (ARBFLWGRR)
- 1 River Flood Statement (ARBFLSGRR)
- 22 Areal Flood Advisories (ARBFLSGRR)
- 49 River Flood Advisories (ARBFLSGRR)
- 22 Hydrologic Statements (ARBRVSGRR)
 - 1 Probabilistic Hydrologic Outlook (ARBESFGRR)
- 31 Hydrologic Summaries (ARBRVAGRR)
- 31 Daily River and Lake Summaries (ARBRVDGRR)