

<b>NWS FORM E-5</b>  U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL WEATHER SERVICE  <b>MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS</b>  TO: NATIONAL WEATHER SERVICE (W/OH12x1) HYDROMETEOROLOGICAL INFO CENTER 1325 EAST-WEST HIGHWAY, RM 7116 SILVER SPRING, MD 20910	HSA OFFICE: <b>Marquette, MI</b>
	REPORT FOR (MONTH / YEAR): <b>July 2011</b>
	DATE: <b>August 11, 2011</b>
	SIGNATURE: <b>Robin J. Turner, MIC</b> <b>Justin Titus, Meteorologist</b>
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 no flooding occurred within this Hydrologic Service Area.

**July Flooding**

No flooding was reported to the National Weather Service.

**July Precipitation**

July precipitation was generally well below normal over the west half of Upper Michigan and near to below normal over the east half of Upper Michigan. The west saw roughly 50 percent or less of normal precipitation, where 0.5 to 3.0 inches of rain was observed. Over the east, precipitation amounts were generally 50 percent or greater of normal precipitation, with 2.0 to 5.0 inches observed. There were also some locally higher areas where stationary or training thunderstorms dropped heavy rainfall.

Below is a chart of some of the larger cities in the Upper Peninsula, with monthly precipitation in inches and the amount of inches above or below normal for the month.

Location	Precipitation	Normal	Above/Below	Rank
WFO Marquette	0.86	2.89	-2.03	3 <sup>rd</sup>
Marquette City	1.43	2.82	-1.39	9 <sup>th</sup>
Houghton Airport	1.40	2.91	-1.51	
Ironwood	2.66	4.00	-1.34	
Iron Mountain	2.14	3.57	-1.43	
Manistique	1.14	3.05	-1.91	
Munising	2.04	3.17	-1.13	
Newberry	2.51	2.81	-0.30	
Ontonagon	1.73	3.24	-1.51	

Other monthly precipitation totals from coop observers:

Location	Precipitation (inches)
Amasa (Iron County)	0.62
Atlantic Mine (Houghton County)	2.37
Baraga (Baraga County)	0.77
Bergland Dam (Ontonagon County)	1.98
Big Bay (Marquette County)	0.78
Chatham (Alger County)	1.41
Clarksburg (Marquette County)	1.81
Cooks (Schoolcraft County)	1.80
Copper Harbor (Keweenaw County)	1.55
Garden Corners (Delta County)	1.23
Gladstone (Delta County)	2.50
Greenland (Ontonagon County)	2.47
Gwinn (Marquette County)	0.91
Harvey (Marquette County)	1.56
Herman (Baraga County)	1.56
Ishpeming (Marquette County)	1.16
Jacobsville (Houghton County)	3.32
Marquette West (Marquette County)	1.05
Mohawk (Keweenaw County)	1.42
Menominee (Menominee County)	2.10
Norway (Dickinson County)	1.94
Painesdale (Houghton County)	4.21
Rapid River (Delta County)	3.37
Stambaugh (Iron County)	1.78
Twin Lakes (Houghton County)	2.07
Two Heart (Luce County)	2.07
Watersmeet (Gogebic County)	1.36
Watton (Baraga County)	1.64

We Energies Rain Gauges (inches)\*

Crystal Falls (Iron County)	3.24
Witch Lake (Marquette County)	1.70
Iron River (Iron County)	1.49
Covington (Baraga County)	1.44

\* *This data has not been quality controlled by the National Weather Service.*

**Drought Discussion**

According to the latest release of the U.S. Drought Monitor, areas roughly west of a line from Marquette to Escanaba were classified as Abnormally Dry. East of this line, no drought conditions were noted.

For the latest drought status, please go to <http://www.drought.unl.edu/dm/monitor.html>.

## **July Temperatures**

Below is a table of some of the larger cities in the Upper Peninsula, with average monthly temperature and number of degrees above or below normal for the month, and the rank of an all-time coldest month, where applicable.

Location	Temperature (degrees)	Above/Below	Rank
WFO Marquette	69.5	4.4	3 <sup>rd</sup>
Marquette City	70.3	3.9	4 <sup>th</sup>
Houghton Airport	68.8	3.8	
Ironwood	70.2	3.3	
Iron Mountain	72.1	4.4	6 <sup>th</sup>
Manistique	66.9	2.0	
Munising	68.3	3.7	8 <sup>th</sup>
Newberry	67.0	1.8	
Ontonagon	71.0	4.0	3 <sup>rd</sup>

## **July River Levels**

July average streamflow was near normal over much of eastern Upper Michigan, as well as rivers in the Menominee River Basin. Average streamflow over the rest of the western areas was below normal.

## **July Products Issued**

Flood Warnings (FLW): 0  
Flood Advisories (FLS): 6  
River Statements (RVS): 0  
Flash Flood Watches (FFA): 0  
Flash Flood Warnings (FFW): 0  
Flash Flood Statements (FFS): 0

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