

<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>August 2011</b>
	DATE: <b>September 5, 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.

**August Flooding**

No flooding was reported to the National Weather Service (NWS).

**August Precipitation**

August precipitation was generally well below normal over much of Upper Michigan. Most locations saw 20 to 60 percent of normal precipitation, with 0.5 to 3.0 inches of rain observed. There were also some areas that received locally higher precipitation amounts where stationary or training thunderstorms dropped heavy rainfall. A couple locations that received the higher precipitation amounts were near Ontonagon, Ironwood and Menominee, MI where around 3-5 inches of rainfall fell.

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	1.12	3.09	-1.97	6 <sup>th</sup>
Marquette City	0.85	2.79	-1.94	6 <sup>th</sup>
Houghton Airport	1.77	2.94	-1.17	
Ironwood	3.53	3.63	-0.10	
Iron Mountain	M	3.57	M	M
Manistique	1.45	3.14	-1.69	8 <sup>th</sup>
Munising	1.44	3.09	-1.65	
Newberry	1.88	3.07	-1.19	
Ontonagon	4.09	3.04	1.05	6 <sup>th</sup>

Other monthly precipitation totals from coop observers:

Location	Precipitation (inches)
Amasa (Iron County)	M
Atlantic Mine (Houghton County)	2.62
Baraga (Baraga County)	1.38
Bergland Dam (Ontonagon County)	4.24
Big Bay (Marquette County)	1.47
Chatham (Alger County)	0.73
Clarksburg (Marquette County)	1.51
Cooks (Schoolcraft County)	0.75
Copper Harbor (Keweenaw County)	1.22
Garden Corners (Delta County)	0.50
Gladstone (Delta County)	1.02
Greenland (Ontonagon County)	4.73
Gwinn (Marquette County)	2.56
Harvey (Marquette County)	0.94
Herman (Baraga County)	3.43
Ishpeming (Marquette County)	1.91
Jacobsville (Houghton County)	2.14
Marquette West (Marquette County)	1.70
Mohawk (Keweenaw County)	1.79
Menominee (Menominee County)	5.01
Norway (Dickinson County)	1.29
Painesdale (Houghton County)	2.09
Rapid River (Delta County)	0.73
Stambaugh (Iron County)	1.48
Twin Lakes (Houghton County)	2.18
Two Heart (Luce County)	1.09
Watersmeet (Gogebic County)	2.11
Watton (Baraga County)	3.49

We Energies Rain Gauges (inches)\*

Crystal Falls (Iron County)	2.10
Witch Lake (Marquette County)	3.30
Iron River (Iron County)	1.76
Covington (Baraga County)	3.40

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

**Drought Discussion**

Increasing precipitation deficits continue to worsen drought conditions. At the NWS office, located in Negaunee Township, only 1.98 inches of rain fell from July through August this year, making this the driest July through August period on record (records go back to 1961). Also, the last time 0.25 inches or more rain fell at the NWS office on a single day was June 23<sup>rd</sup>, 2011.

According to the latest release of the U.S. Drought Monitor, the Keweenaw Peninsula, northern Baraga County and much of Marquette County were classified in Moderate (D1) Drought. Areas roughly west of a line from Newberry to Manistique were classified as Abnormally Dry (D0). East of the Newberry to Manistique line and over extreme western Gogebic County, no drought conditions were noted.

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

## **August 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	66.2	3.1	5 <sup>th</sup>
Marquette City	70.1	4.7	3 <sup>rd</sup>
Houghton Airport	65.6	2.2	
Ironwood	65.7	1.1	
Iron Mountain	M	M	M
Manistique	65.1	0.6	
Munising	65.6	1.9	
Newberry	64.1	0.4	
Ontonagon	67.7	1.3	

## **August River Levels**

August streamflow was generally near normal in the Lake Michigan drainage basins, and below normal in Lake Superior drainage basins.

## **August Products Issued**

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

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