

<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>March 2013</b>
	DATE: <b>June 5, 2013</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).	

X

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

**March Flooding**

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

**March Precipitation**

March precipitation continued to be above to well above normal in most locations, especially in areas favored by north to northwest wind lake effect snow. A few storm systems brought wetter snow to mainly central and eastern Upper Michigan, helping those areas to see above normal precipitation amounts. Persistent north to northwest winds favored areas from Ironwood to the Keweenaw Peninsula and areas from around Marquette east for lake effect snow. Cold temperatures allowed for virtually no melting of the existing snowpack in most places.

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

Location	Precipitation	Above/Below	Rank	Snowfall	Above/Below	Rank
WFO Marquette	3.29	0.26		48.8	13.9	9 <sup>th</sup>
Marquette City	1.32	-0.68		17.3	-4.4	
Houghton Airport	M	M		M	M	
Ironwood	2.00	0.02		31.0	6.1	
Iron Mountain	1.88	0.23		13.0	2.4	
Manistique	1.88	0.09		7.2	M	
Munising	2.62	0.53		33.4	14.6	8 <sup>th</sup>
Newberry	2.09	M		22.8	M	
Ontonagon 6SE	2.26	0.53	10 <sup>th</sup>	37.5	18.6	

Other monthly precipitation totals from coop observers:

Location	Precipitation (inches)	Snowfall (inches)
Alberta (Baraga County)	1.37	26.8
Amasa (Iron County)	1.53	16.0
Atlantic Mine (Houghton County)	2.85	42.0
Baraga 7NW (Baraga County)	2.55	28.4
Big Bay (Marquette County)	2.03	27.4
Chatham (Alger County)	2.03	24.5
Clarksburg (Marquette County)	2.09	27.5
Cooks (Schoolcraft County)	1.93	14.7
Copper Harbor (Keweenaw County)	1.85	17.8
Garden Corners (Delta County)	1.95	11.8
Gladstone (Delta County)	1.97	14.5
Greenland 6N (Ontonagon County)	2.66	33.1
Gwinn (Marquette County)	1.68	18.1
Harvey (Marquette County)	1.00	13.0
Herman (Baraga County)	3.35	52.6
Jacobsville (Houghton County)	2.34	24.9
Mohawk (Keweenaw County)	2.82	37.2
Menominee (Menominee County)	2.01	7.4
Norway (Dickinson County)	2.02	15.3
Stambaugh (Iron County)	1.54	8.7
Twin Lakes (Houghton County)	3.78	63.5
Watersmeet (Gogebic County)	1.09	25.1
Watton (Baraga County)	2.07	23.4

**Drought Discussion**

According to the April 2<sup>nd</sup>, 2013 release of the U.S. Drought Monitor, many areas along the Wisconsin Border were classified under Abnormally Dry (D0) drought, with areas of Iron and Dickinson Counties under Moderate (D1) drought. Elsewhere, no drought was indicated. For the latest drought status, please go to <http://www.crh.noaa.gov/mqt/?n=drought>.

**March 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 warmest or coldest month, where applicable.

Location	Temperature (degrees)	Above/Below	Rank
WFO Marquette	21.2	-3.0	
Marquette City	26.0	-3.0	
Houghton Airport	21.3	-3.9	
Ironwood	19.8	-5.3	
Iron Mountain	23.6	-4.3	
Manistique	25.2	-1.9	
Munising	25.5	-2.2	
Newberry	24.9	1.6	
Ontonagon 6SE	24.3	-4.6	

## **March River Levels**

According to the United States Geological Survey, March streamflow was normal (25-75 percentile) in most Lake Superior Basins of Upper Michigan and below normal (10-24 percentile) in Lake Michigan Basins of Upper Michigan.

## **March 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

CC:  
Robin J. Turner - WFO MQT MIC  
Justin Titus – WFO MQT HPM  
Mark Walton - WFO GRR SH