

<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>June 2018</b>
	DATE: <b>July 12, 2018</b>
	SIGNATURE: <b>Robin J. Turner, MIC</b> <b>Keith White, Hydrology Program Manager</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.

### **June Flooding**

June was a very active month in the Upper Peninsula hydrologically, with the majority of the action occurring over Fathers' Day Weekend which led to state disaster declarations for Houghton, Gogebic, and Menominee Counties. An initial Flood Watch was issued on Friday, June 15<sup>th</sup> for Ontonagon and Gogebic counties and was extended to Houghton and Keweenaw in the early morning hours of Sunday, June 17<sup>th</sup> and to Iron, Dickinson, and Menominee that afternoon.

The first round of heavy rain came in Gogebic county the morning/early afternoon of Friday, June 15<sup>th</sup> and primarily affected Gogebic county where 3-4+'' of rain led to numerous areas of street flooding in Ironwood, Bessemer, and Wakefield.

On Saturday, June 16<sup>th</sup>, the focus for thunderstorms and heavy rain shifted to southeastern Dickinson and central Menominee counties, where isolated areas of 2-3'' of rain in a short timeframe led to scattered reports of road damage and street flooding.

The most impactful portion of this event unfolded in the early morning hours of Sunday, June 17<sup>th</sup>. A concentrated area of central Houghton County received 5-7'' of rain in the Midnight to 6AM timeframe. Numerous, widespread sinkholes and complete washouts were reported from the Lake Linden area south through Dollar Bay, Hancock, Houghton, and Chassell.

As the excess water worked its way through the basin, minor river flooding was seen on the Sturgeon River at Alston on the 18<sup>th</sup> and at Chassell on the 19<sup>th</sup> through the morning of the 21<sup>st</sup>.

Minor urban Flash Flooding was reported in central Marquette County with additional thunderstorm activity the evening of the 17<sup>th</sup>.

More details on this event can be found on our [Top News](#) summary.

Additional minor urban flash flooding was reported in central portions of the UP on June 30<sup>th</sup>.

### **June Precipitation**

Above average precipitation was observed across a large swath of the Upper Peninsula in June with the exception of the eastern third which was abnormally dry. The highest rainfall totals came from the central/southern Keweenaw Peninsula into Baraga County as well as areas near the WI border.

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. For some locations, this was easily one of the wettest Junes on record.

Location	Precipitation	Above/Below	Rank (if applicable)
WFO Marquette	5.37 <sup>“</sup>	+2.53 <sup>”</sup>	8
Marquette City	3.67 <sup>”</sup>	+0.99 <sup>”</sup>	
Houghton Airport	9.48 <sup>”</sup>	+6.90 <sup>”</sup>	1
Ironwood	8.73 <sup>”</sup>	+5.07 <sup>”</sup>	3
Iron Mountain	5.08 <sup>”</sup>	+1.60 <sup>”</sup>	21
Manistique	3.09 <sup>“</sup>	+0.14 <sup>”</sup>	
Munising	2.46 <sup>”</sup>	-0.90 <sup>”</sup>	
Newberry	1.77 <sup>”</sup>	-1.21 <sup>”</sup>	
Stambaugh	4.90 <sup>”</sup>	+1.17 <sup>”</sup>	

Other monthly precipitation totals from coop observers: (Note: Rank only given if available and significant, Period of Record (POR) also listed)

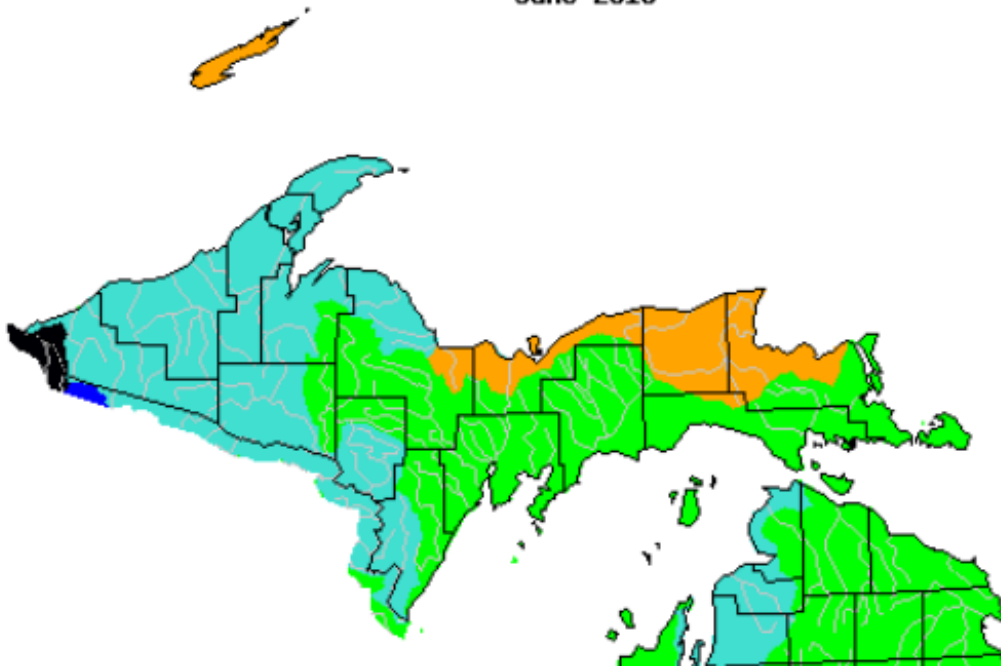
Location	Precipitation (inches)	Rank (POR)
Amasa (Iron County)	3.00	
Atlantic Mine (Houghton County)	10.05	
Baraga 7NW (Baraga County)	6.10	1 (19 yrs)
Bergland Dam (Ontonagon County)	4.21	
Big Bay (Marquette County)	2.79	
Big Bay 9SW (Marquette County)	3.45	
Chatham (Alger County)	4.48	6 (31 years)
Clarksburg (Marquette County)	4.21	8 (19 years)
Copper Harbor (Keweenaw County)	2.35	
Garden Corners (Delta County)	3.72	5 (14 years)
Gladstone (Delta County)	3.85	5 (16 years)
Greenland 6N (Ontonagon County)	3.83	
Harvey (Marquette County)	4.24	
Herman (Baraga County)	6.28	5 (50 years)
Jacobsville (Houghton County)	7.39	1 (10 years)
Kearsarge (Houghton County)	4.67	
Menominee (Menominee County)	4.00	
Norway (Dickinson County)	6.32	
Watersmeet 12sw (Gogebic County)	5.77	
Watton (Baraga County)	4.93	









### **Drought Discussion**

The July 12, 2018 release of the U.S. Drought Monitor has removed the western Upper Peninsula from D0 status since last month, but rain deficiencies in the eastern Upper Peninsula have led to an upgrade to D0 status for Luce County as well as Chippewa and Mackinac Counties in WFO Gaylord's HSA. For the latest drought status, please go to <http://www.drought.gov>.

## June River Levels

June 2018



Explanation - Percentile classes								
								
Low	<10	10-24	25-75	76-90	>90	High	No Data	
	Much below normal	Below normal	Normal	Above normal	Much above normal			

## June Products Issued

- 1 – Flash Flood Watch (FFA)
- 7 – Flash Flood Warning (FFW) including one Flash Flood Emergency
- 4 – Flash Flood Statement (FFS)
- 3 – Flood Warning (FLW)
- 33 – Flood Advisories and Statements (FLS)
- 30 – Hydrologic Summary
- 1 – Hydrologic Outlook