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| <b>NWS FORM E-5</b><br><br>U.S. DEPARTMENT OF COMMERCE<br>NOAA, NATIONAL WEATHER SERVICE<br><br><b>MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS</b><br><br>TO: NATIONAL WEATHER SERVICE (W/OH12x1)<br>HYDROMETEOROLOGICAL INFO CENTER<br>1325 EAST-WEST HIGHWAY, RM 7116<br>SILVER SPRING, MD 20910 | HSA OFFICE:<br><b>Marquette, MI</b>   |
|   | REPORT FOR (MONTH / YEAR):<br><b>October 2015</b>                               |
|   | DATE: <b>November 17, 2015</b>  |
|   | SIGNATURE:<br><b>Robin J. Turner, MIC</b><br><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.

**October Flooding**

No flooding was reported to the National Weather Service.

**October Precipitation**

October precipitation was generally below to well below normal.

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 | Snow    | Above/Below | Rank |
|------------------|---------------|-------------|------|---------|-------------|------|
| WFO Marquette    | 2.94          | -0.90       |      | 1.2     | -4.8        |      |
| Marquette City   | 2.86          | -0.27       |      | 2.5     | 1.5         |      |
| Houghton Airport | 3.19          | 0.20        |      | No Data | No Data     |      |
| Ironwood         | 3.67          | -0.31       |      | Trace   | -6.6        |      |
| Iron Mountain    | 2.34          | -0.80       |      | Trace   | -0.3        |      |
| Manistique       | 3.10          | -0.38       |      | 0.0     | No Data     |      |
| Munising         | 3.12          | -1.11       |      | 0.1     | -1.3        |      |
| Newberry         | 2.74          | No Data     |      | 1.2     | No Data     |      |

Other monthly precipitation totals from coop observers:

| Location                        | Precipitation (inches) | Snow (inches) |
|---------------------------------|------------------------|---------------|
| Ahmeek 1SW                      | 2.75                   | 0.2           |
| Amasa (Iron County)             | 2.49                   | 0.0           |
| Atlantic Mine (Houghton County) | 2.09                   | Trace         |
| Baraga 7NW (Baraga County)      | 1.67                   | Trace         |
| Big Bay (Marquette County)      | 2.35                   | 0.5           |
| Chatham (Alger County)          | 4.25                   | 5.3           |
| Clarksburg (Marquette County)   | 2.49                   | 0.1           |
| Cooks (Schoolcraft County)      | 3.44                   | 0.5           |
| Copper Harbor (Keweenaw County) | 2.01                   | Missing       |
| Garden Corners (Delta County)   | 3.04                   | Trace         |
| Gladstone (Delta County)        | 2.41                   | Trace         |
| Greenland 6N (Ontonagon County) | 2.72                   | 0.2           |
| Gwinn (Marquette County)        | 2.67                   | 0.0           |
| Harvey (Marquette County)       | Missing                | Missing       |
| Herman (Baraga County)          | 2.85                   | Trace         |
| Houghton (Houghton County)      | 2.60                   | Trace         |
| Jacobsville (Houghton County)   | 2.14                   | Trace         |
| Mohawk (Keweenaw County)        | 3.29                   | 0.2           |
| Menominee (Menominee County)    | Missing                | Missing       |
| Norway (Dickinson County)       | Missing                | Missing       |
| Paulding (Ontonagon County)     | 2.64                   | Trace         |
| Stambaugh (Iron County)         | 2.68                   | 0.0           |

**Drought Discussion**

The November 3, 2015 release of the U.S. Drought Monitor indicated that drought conditions ranged from D1 (Moderate Drought) over north central portions of Upper Michigan to no drought over far south central Upper Michigan. For the latest drought status, please go to <http://www.drought.gov>.

**October 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    | 43.8                  | 0.6         |      |
| Marquette City   | 48.6                  | 1.3         |      |
| Houghton Airport | 45.6                  | 2.2         |      |
| Ironwood         | 44.5                  | 1.1         |      |
| Iron Mountain    | 46.8                  | 1.8         |      |
| Manistique       | 47.1                  | 1.6         |      |
| Munising         | 45.8                  | 0.2         |      |
| Newberry         | 45.3                  | 1.5         |      |

## **October River Levels**

According to the United States Geological Survey, October average streamflow was below normal (10-24 percentile) to much below normal (<10 percentile) across most of Upper Michigan.

## **October Products Issued**

31 – Daily River and Lake Summary

31 – Hydrologic Summary

1 – Hydrologic Outlook

CC:

Robin J. Turner - WFO MQT MIC

Justin Titus – WFO MQT HPM