Good Afternoon Hydro Inquisitors,

We have issued the final planned spring flood outlook for Upper Michigan this afternoon.

The overall flood risk this spring has increased since the last spring flood outlook, but still remains near- to below-normal across most of west and central Upper Michigan.

Factors leading to the lower probabilities are well below-normal precipitation last fall, with a near- to below-normal snowfall this winter. This has kept soil moistures lower than normal. Stream flows across Upper Michigan are running near- to below-normal. Frost depths remain relatively low across Upper Michigan.

Let's compare this year to our most recent spring flood year back in 2019. On March 10th, 2019, our SWE value at the office was 11.5 inches, with a snow depth of 47 inches. After taking a SWE at the office this morning, we measured a SWE of 6.4 inches, with a snow depth of roughly 25 inches. This spring, we half a little over half of the SWE that we had back in 2019.

[What is SWE or Snow Water Equivalent?](https://urldefense.com/v3/__https%3A/www.nrcs.usda.gov/wps/portal/nrcs/detail/null/?cid=nrcseprd1314833__;!!Ke4ZjjE!WtulVKf6mUE4B64zZ2MqZFCtrshwGKv2RC-iNFvr4hiqwlbfsA1WhJrZ-iqz$) Essentially...if we melted all the snow on the ground right now, how much liquid water would it turn into?

The factor that is still unknown is also the single biggest factor when it comes to spring melt flooding, and that is future temperatures and additional precipitation. Models are starting to trend towards a warm up during the middle of next week (March 16th) into next weekend, with daytime highs climbing into the mid 30s to 40s and nighttime lows falling back to near or slightly below freezing. At this time, there is no strong signal for larger precipitation events moving through Upper Michigan during this warm up; however, there is a better chance that a system will bring rain to our SE across the Ohio River Valley next weekend. This will want to be monitored during the week ahead for potential rain on top of melting snow.

If you'd like to read the full write up, you can find that [here](https://urldefense.com/v3/__https%3A/forecast.weather.gov/product.php?site=mqt&product=ESF&issuedby=MQT&glossary=1__;!!Ke4ZjjE!WtulVKf6mUE4B64zZ2MqZFCtrshwGKv2RC-iNFvr4hiqwlbfsA1WhEZ74Xm1$).

You can also find these data on our website [here](https://urldefense.com/v3/__https%3A/water.weather.gov/ahps2/long_range.php?wfo=MQT__;!!Ke4ZjjE!WtulVKf6mUE4B64zZ2MqZFCtrshwGKv2RC-iNFvr4hiqwlbfsA1WhPbW7MLa$).

If there are any questions about this, or you would like additional information, please reach out to me at jordan.wendt@noaa.gov. I would be happy to answer any and all questions you may have.

Regards,

Jordan

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**National Weather Service Marquette**

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