

# HUC1\_\_01013500

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## Gage Information

HUC: 1

USGS gage ID: 01013500

Latitude: 47.237; Longitude: -68.582

Catchment area: 873 square miles

Catchment elevation: 511.4 feet

Data availability (85 water years): 10/1/1930-9/30/2014

## Flood Information

Mean Flood Date: 04/30

Flood Seasonality Index: 0.961

Table 1: Peaks-over-threshold floods (record flood bolded)

Date	Streamflow (cfs)
1961-05-16	13300
1969-05-12	12400
1973-04-30	15600
1979-04-30	12800
1983-04-26	13600
2005-05-01	13800
<b>2008-04-30</b>	<b>17900</b>

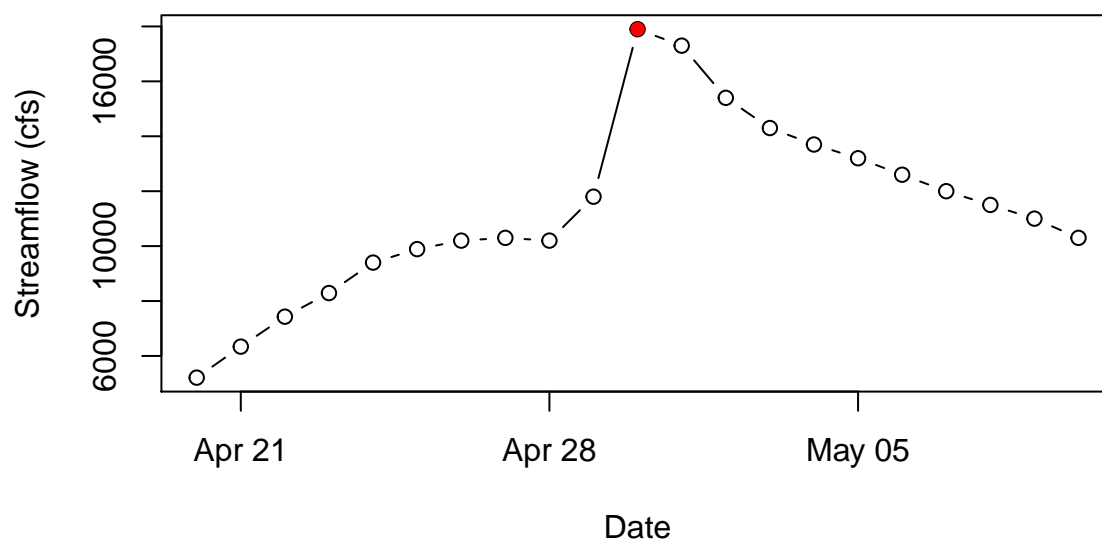


Figure 1: Streamflow at time of record flood (record magnitude in red)

## Reanalysis Data

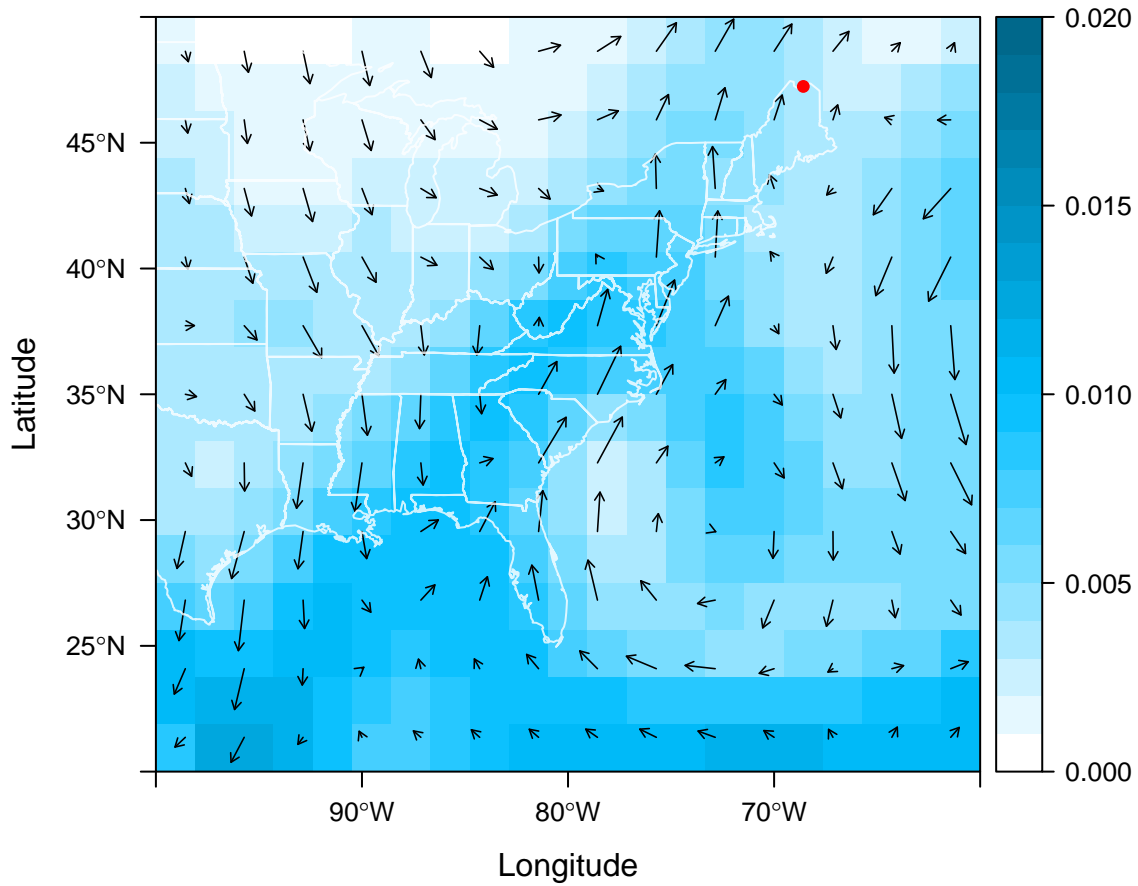


Figure 2: Reanalysis climate data two days before record flood at 850 mbar where vectors are wind (units m/s, multiplied by 2) and color field is specific humidity (units kg/kg) (red dot is gage location)

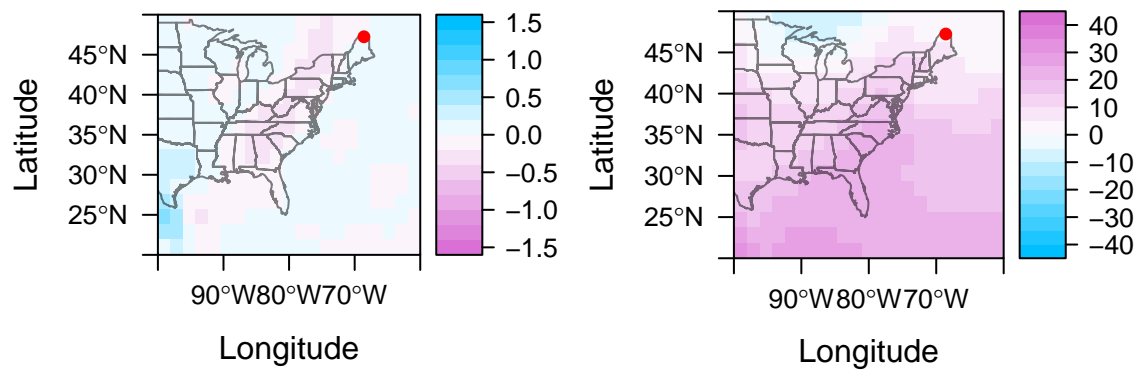


Figure 3: Reanalysis climate data two days before record flood (left) omega at 850 mbar (vertical velocity in pressure units Pascals/s) and (right) air temperature at 1000 mbar (units deg C) (red dot is gage location)

## Hurricane Data

No hurricane (Figure 4 not created)

## Extreme Precipitation Data

No extreme precipitation/data not available (Figure 5 not created)

## Tropical Moisture Export Data

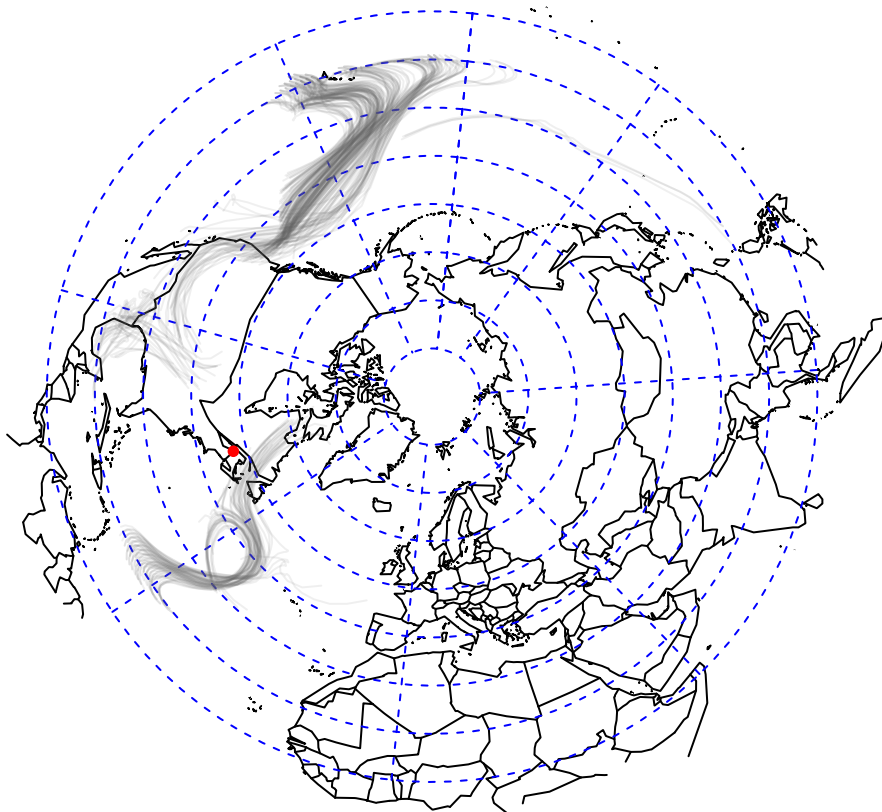


Figure 6: Tropical moisture export tracks originating five days prior to record flood with a total of 0 tracks and change in specific humidity = 0 (units g/kg, negative indicates precipitation) through day of record flood over 4 degree cell centered at gage location (red dot)

## Historic Report Data

No data

## Self-Organizing Map Results

Self-organizing map classification of cause of record flood: eastern front

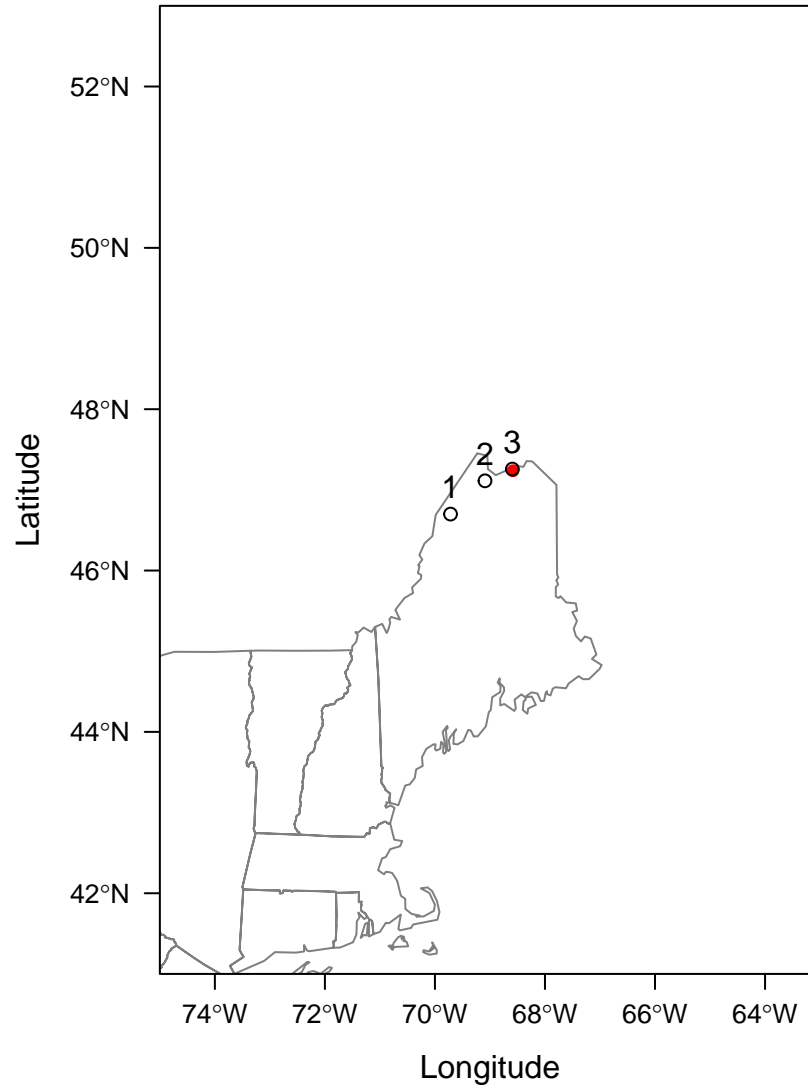


Figure 7: Event (2008-04-30) based on self-organizing map analysis (red dot is gage location, other numbered gages given in Table 2)

Table 2: ID of numbered gages in Figure 7

Number	Gage ID
1	HUC1_01010000
2	HUC1_01010500
3	HUC1_01014000

## Best Guess

tbd

## References

To cite this work or for details regarding the analysis

- Schlef et al. (n.d.). Atmospheric Circulation Patterns Associated with Extreme Floods in the Contiguous United States.

Data for the “Gage Information” and “Flood Information” sections was obtained from

- U.S. Geological Survey (2016). National Water Information System data available on the World Wide Web (USGS Water Data for the Nation), accessed Nov. 1, 2018 at URL <http://waterdata.usgs.gov/nwis/>

Data for the “Reanalysis Data” section was obtained from

- Compo, G. P., Whitaker, J. S., & Sardeshmukh, P. D. (2006). Feasibility of a 100-year reanalysis using only surface pressure data. *Bulletin of the American Meteorological Society*, 87(2), 175-190. <https://doi.org/10.1175/BAMS-87-2-175>

- Compo, G. P., Whitaker, J. S., Sardeshmukh, P. D., Matsui, N., Allan, R. J., Yin, X., et al. (2011). The Twentieth Century Reanalysis Project. *Quarterly Journal of the Royal Meteorological Society*, 137(654), 1-28. <https://doi.org/10.1002/qj.776>

- Whitaker, J. S., Compo, G. P., Wei, X., & Hamill, T. M. (2004). Reanalysis before radiosondes using ensemble data assimilation. *Bulletin of the American Meteorological Society*, 2983-2991. [https://doi.org/10.1175/1520-0493\(2004\)132<1190:RWRUED>2.0.CO;2](https://doi.org/10.1175/1520-0493(2004)132<1190:RWRUED>2.0.CO;2)

Data for the “Hurricane Data” section was obtained from

- Landsea, C. W., & Franklin, J. L. (2013). Atlantic Hurricane Database Uncertainty and Presentation of a New Database Format. *Monthly Weather Review*, 141, 3576-3592.

Data for the “Tropical Moisture Export Data” section was obtained from

- Knippertz, P., & Wernli, H. (2010). A lagrangian climatology of tropical moisture exports to the northern hemispheric extratropics. *Journal of Climate*, 23(4), 987-1003. <https://doi.org/10.1175/2009JCLI3333.1>