

Hooked on a Pattern: The Spring and Summer Floods of 2018 in the Mid-Atlantic Region

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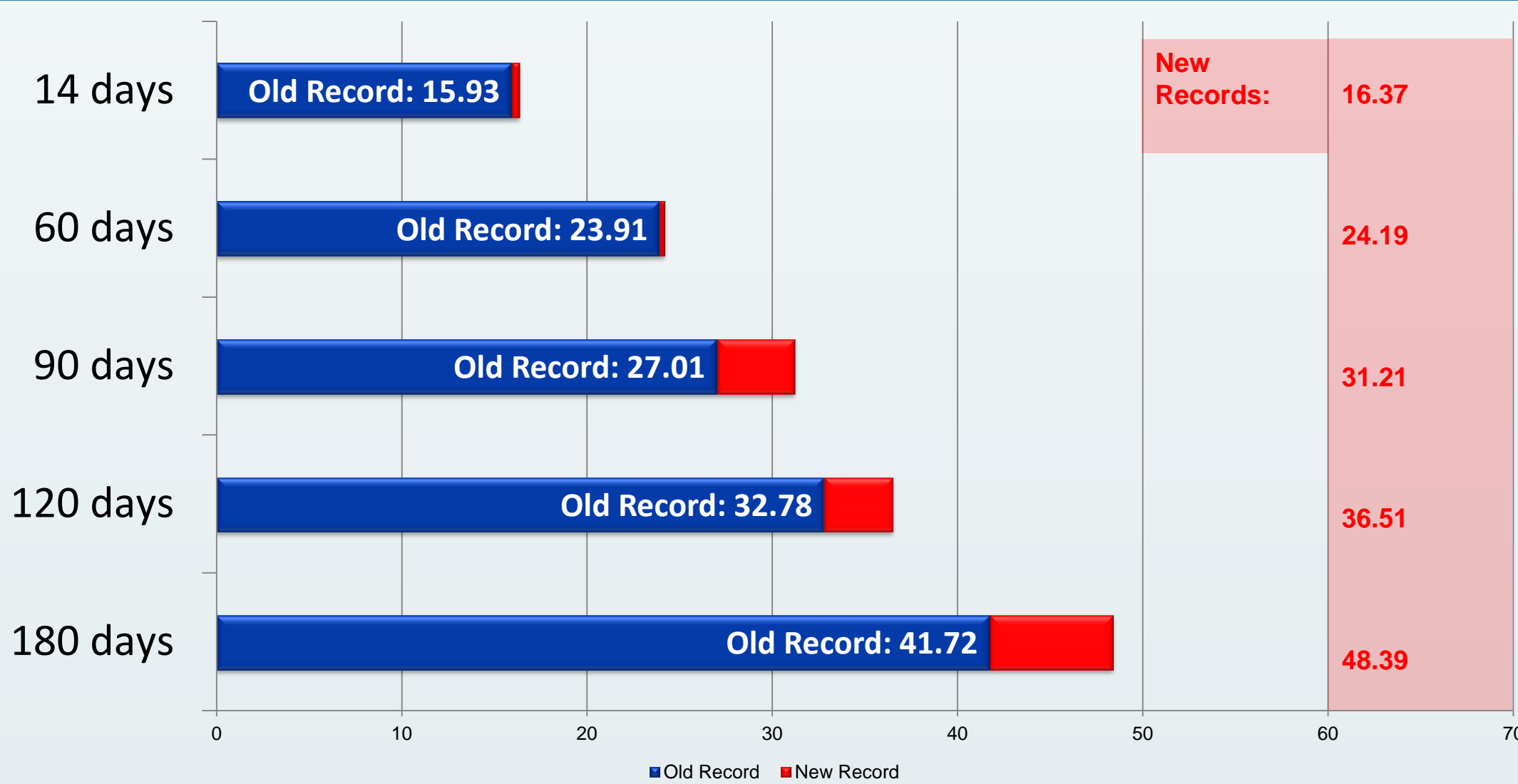
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Overview

Following the driest December-January combined period in the Washington, DC climate record, a pattern shift led to increasing rainfall throughout 2018, becoming more pronounced from the middle of May.

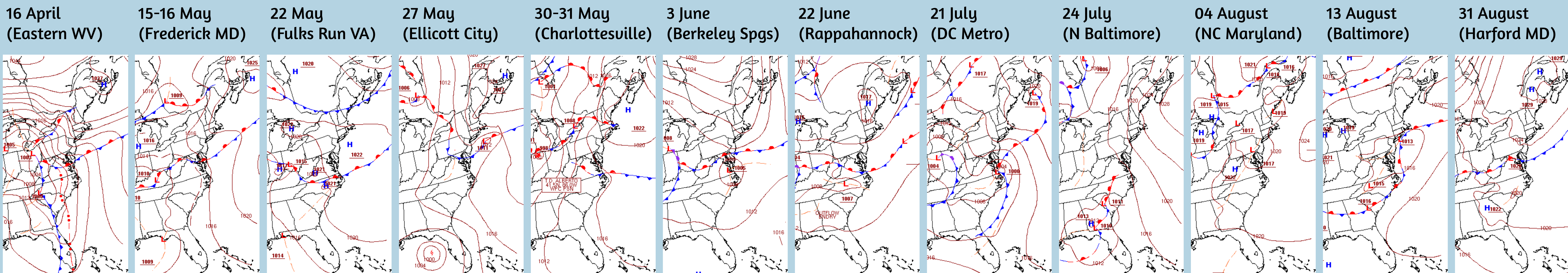
On numerous occasions during the mid-May through September timeframe, the two primary synoptic-scale drivers of heavy precipitation in the mid-Atlantic region – stalled fronts and coastal lows – repeatedly occurred. This led to numerous records being broken during the course of the year, along with widespread and occasionally significant flooding.

Precipitation Records Set in 2018 (BWI Airport)

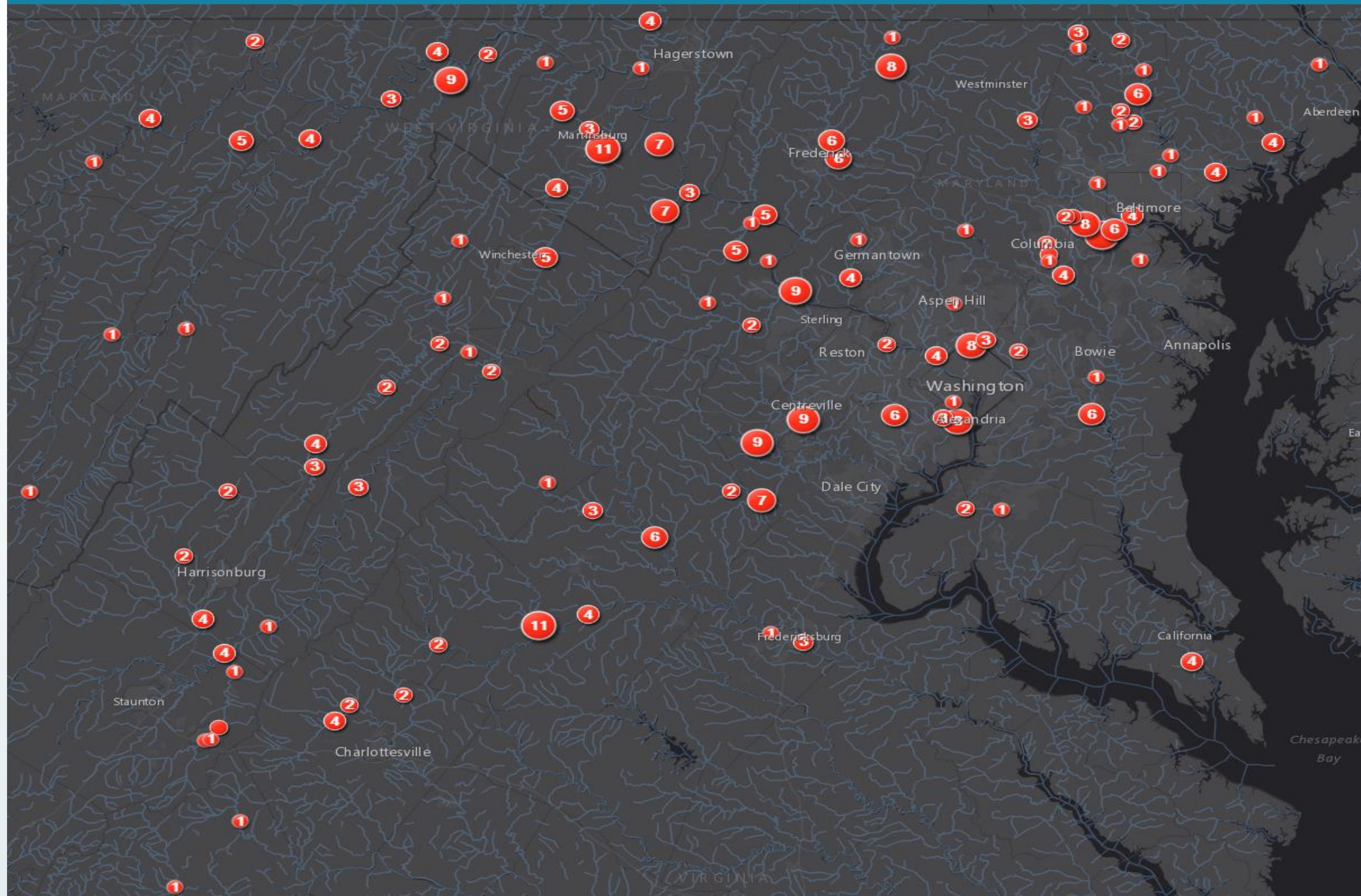


Around 70 inches of rain fell in the region in 2018. Other records set include the **wettest calendar year**, **wettest 365 day period**, wettest July, wettest November, wettest fall (September-November), wettest June and July combined, wettest July and August combined, and wettest November/December combined. Records date to 1871.

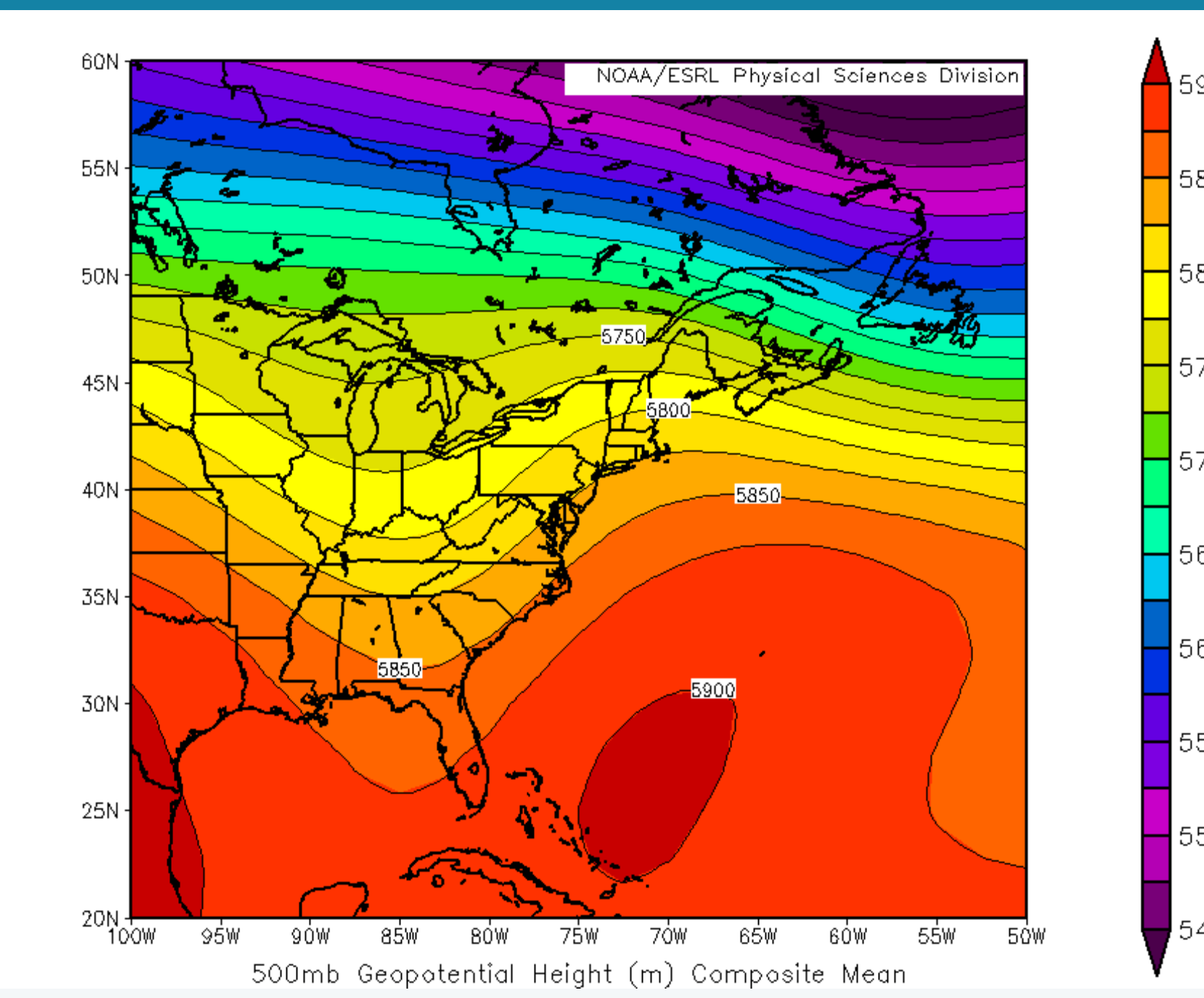
Surface Patterns of Significant Floods



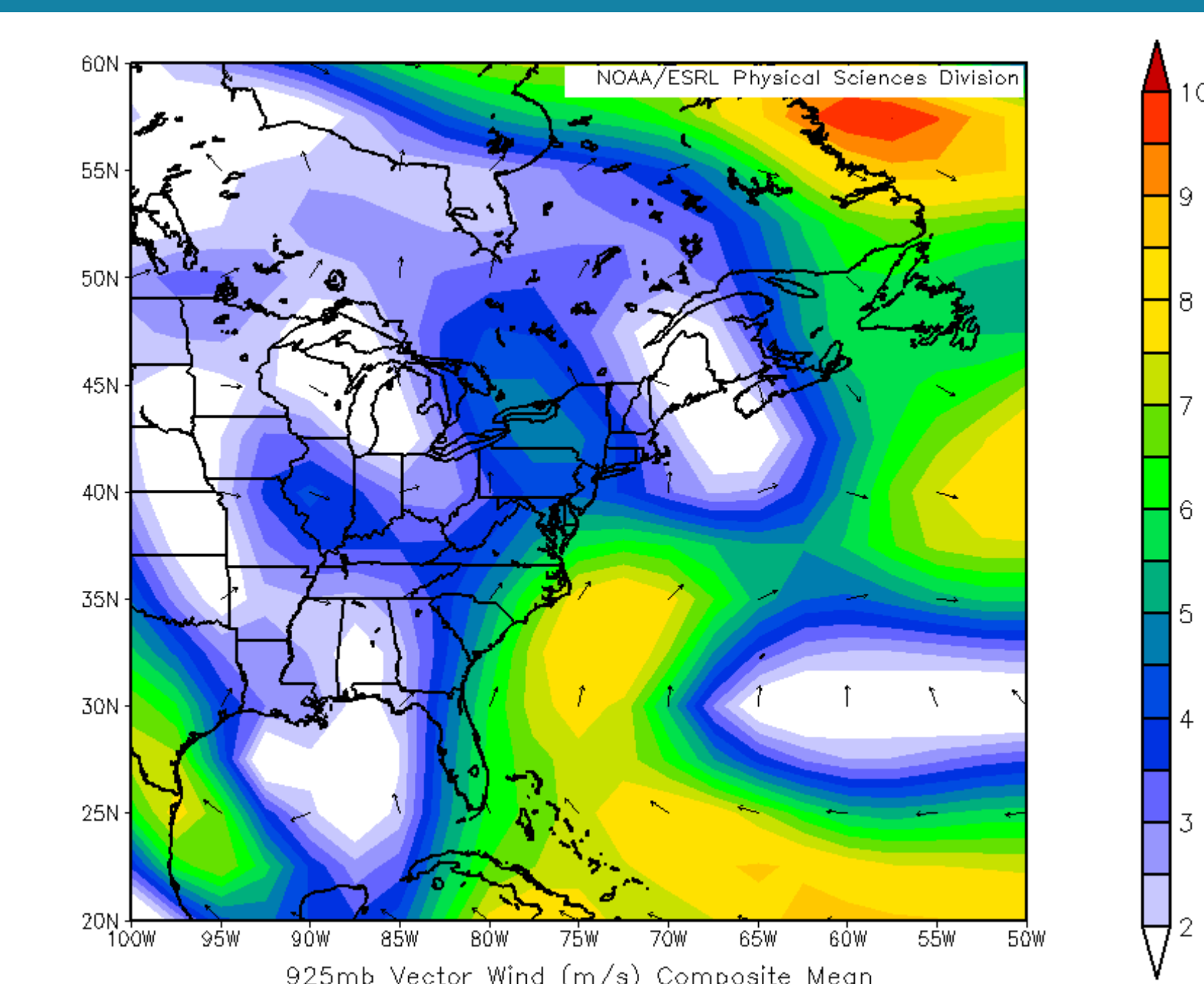
Stream-Based Floods in 2018



Composite 500 hPa Height Pattern of Events



Composite 925 hPa Wind Vector & Speed



By the numbers in 2018:

- 5** flood-related fatalities in the Baltimore/Washington area
- 142** River Forecast Point Flood Warnings issued
- 87** Flash Flood Warnings (+ Emergencies) issued
- 426** Areal/Stream Flood Warnings issued

Stream Flooding Facts:

- Opequon Creek near Martinsburg, WV exceeded flood stage eleven times in 2018, tying the record from 1996. (Data 1946-present)
- Numerous gage locations recorded their highest stream levels since Fran (1996) or Isabel (2003).

For more information: <http://weather.gov/washington/2018floods>