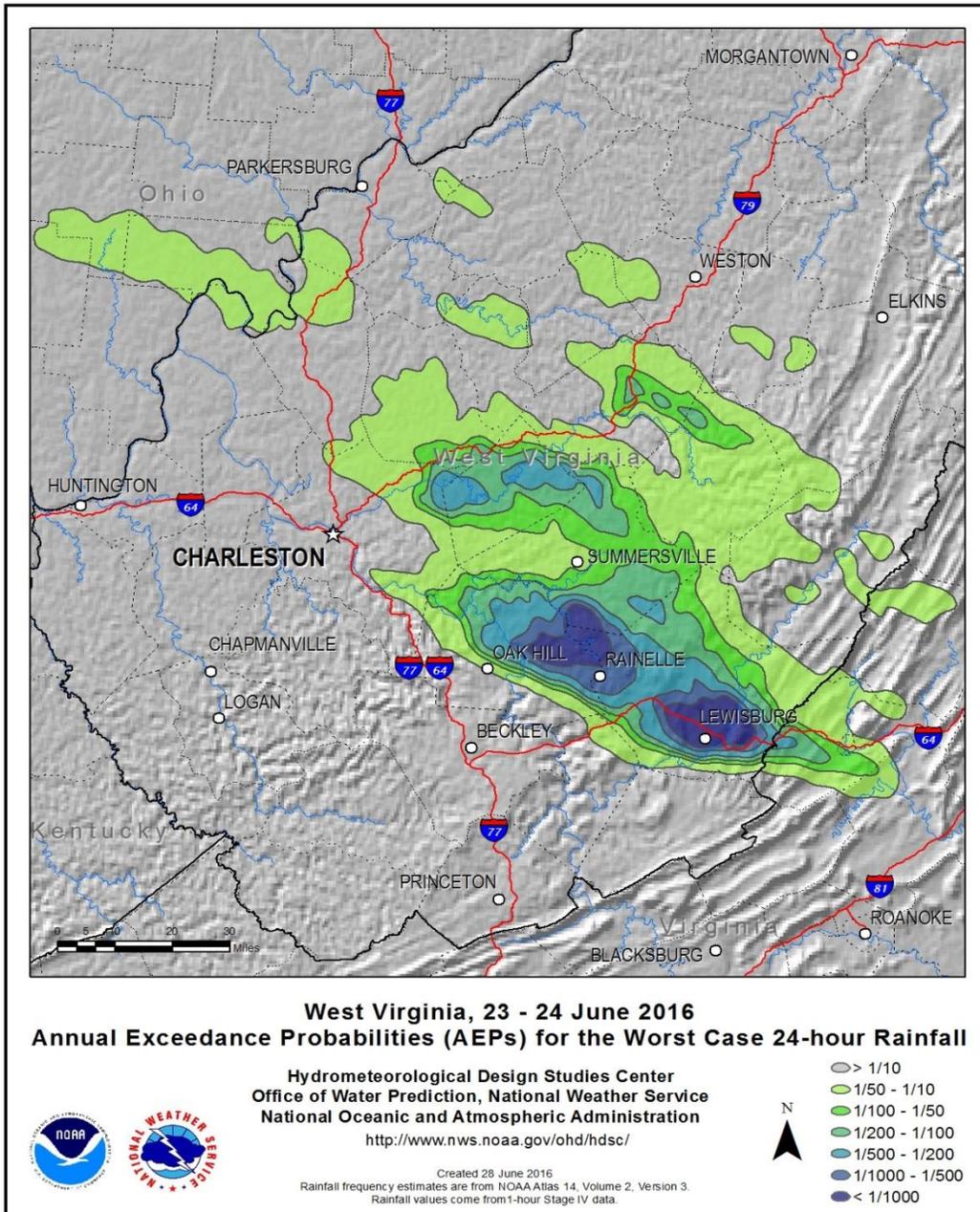


# Historic Rainfall over Greenbrier County WV and Alleghany Co VA June 23, 2016

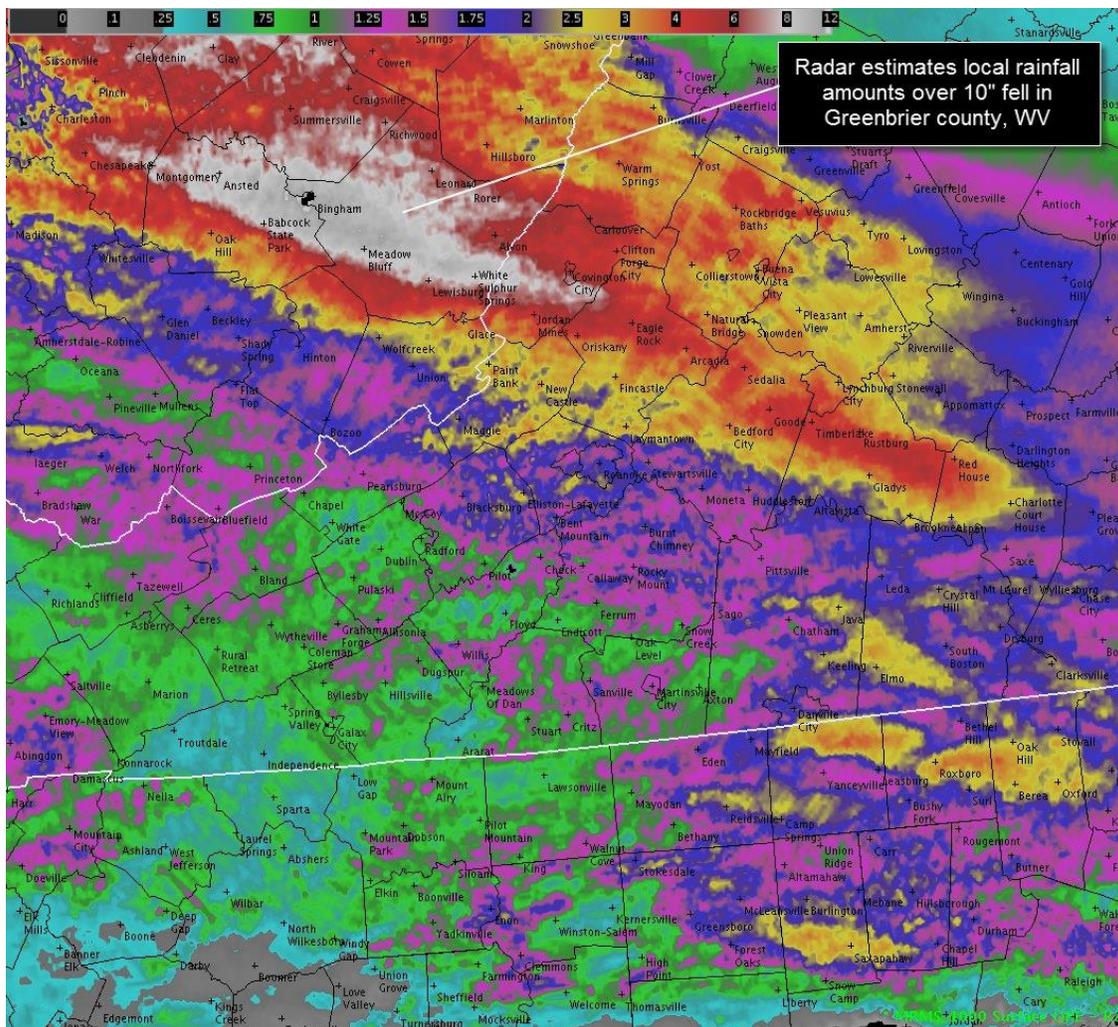
(Updated July 1, 2016)

The NWS Hydrometeorological Design Studies Center (HDSC) has prepared maps of the Annual Exceedance Probabilities (AEP) of the rainfall in southeast West Virginia and far western Virginia for the June 23-24 event. AEP is often referred to as the Annual Recurrence Interval (e.g. 'the 100-year event'). The map below shows the AEP for the most intense 24-hour period of the storm, with a 'thousand-year event in some areas.



Maps of the 1, 3, 6 and 12 hour AEP are also available upon request to NWS Blacksburg. Please visit the HDSC webpage for technical details on AEP: <http://www.nws.noaa.gov/oh/hdsc/index.html>.

Extremely rare amounts of rainfall on June 23, 2016, most of which occurred in several rounds with high rainfall rates all in a time window of under 12 hours, fell across portions of Greenbrier County West Virginia and Alleghany County Virginia. Radar and rain gauge measurements showed as much as 8-10" (perhaps higher locally) in a band across the central portions of these counties. Return period data suggest this would be nearly a 1 in a thousand year event.



| WEST VIRGINIA             |      |        |      |                |  |
|---------------------------|------|--------|------|----------------|--|
| ... GREENBRIER COUNTY ... |      |        |      |                |  |
| MAXWELTON                 | 9.67 | 759 AM | 6/24 | CWOP           |  |
| WHITE SULPHUR SPRING      | 9.17 | 700 AM | 6/24 | CO-OP OBSERVER |  |
| WHITE SULPHUR SPRING      | 8.63 | 745 AM | 6/24 | GOES           |  |
| RAINELLE                  | 7.67 | 745 AM | 6/24 | USARMY-COE     |  |
| KNOB                      | 5.16 | 800 AM | 6/24 | GOES           |  |
| 1 NW ALVON                | 1.36 | 802 AM | 6/24 | CWOP           |  |
| VIRGINIA                  |      |        |      |                |  |
| ... ALLEGHANY COUNTY ...  |      |        |      |                |  |
| 4 E COVINGTON             | 5.59 | 700 AM | 6/24 | COCORAHS       |  |
| 3 NNW COVINGTON CITY      | 5.20 | 758 AM | 6/24 | CWOP           |  |
| COVINGTON FP COOP         | 4.76 | 700 AM | 6/24 | CO-OP OBSERVER |  |
| 1 E CALLAGHAN             | 4.32 | 730 AM | 6/24 | HADS           |  |
| GATHRIGHT DAM COOP        | 4.22 | 700 AM | 6/24 | CO-OP OBSERVER |  |
| 2 NNE NATURAL WELL        | 3.64 | 730 AM | 6/24 | HADS           |  |

*36 hr rainfall ending at 7 or 8am Friday June 24.*

Eventually, we will provide more details at a later date, including more of a review of the meteorology, hydrology, and photos of the impacts. What we can say at the time of this writing is that flash flooding and flooding has been historic in these two counties (as well as other counties farther to the northwest in West Virginia), including major to record flood levels on some rivers, numerous water rescues, power outages, structures damaged, and people temporarily displaced. It will be some time before all the details of the impacts are known. Sadly, there are a number of fatalities being reported in Greenbrier County and other parts of West Virginia.