

## MONTHLY REPORT OF RIVER/FLOOD CONDITIONS

**TO: NATIONAL WEATHER SERVICE  
HYDROMETEOROLOGICAL INFO CENTER  
1325 EAST-WEST HIGHWAY  
SILVER SPRING, MD 20910**

REPORT FOR:  
May 2008  
Date: 6/10/08

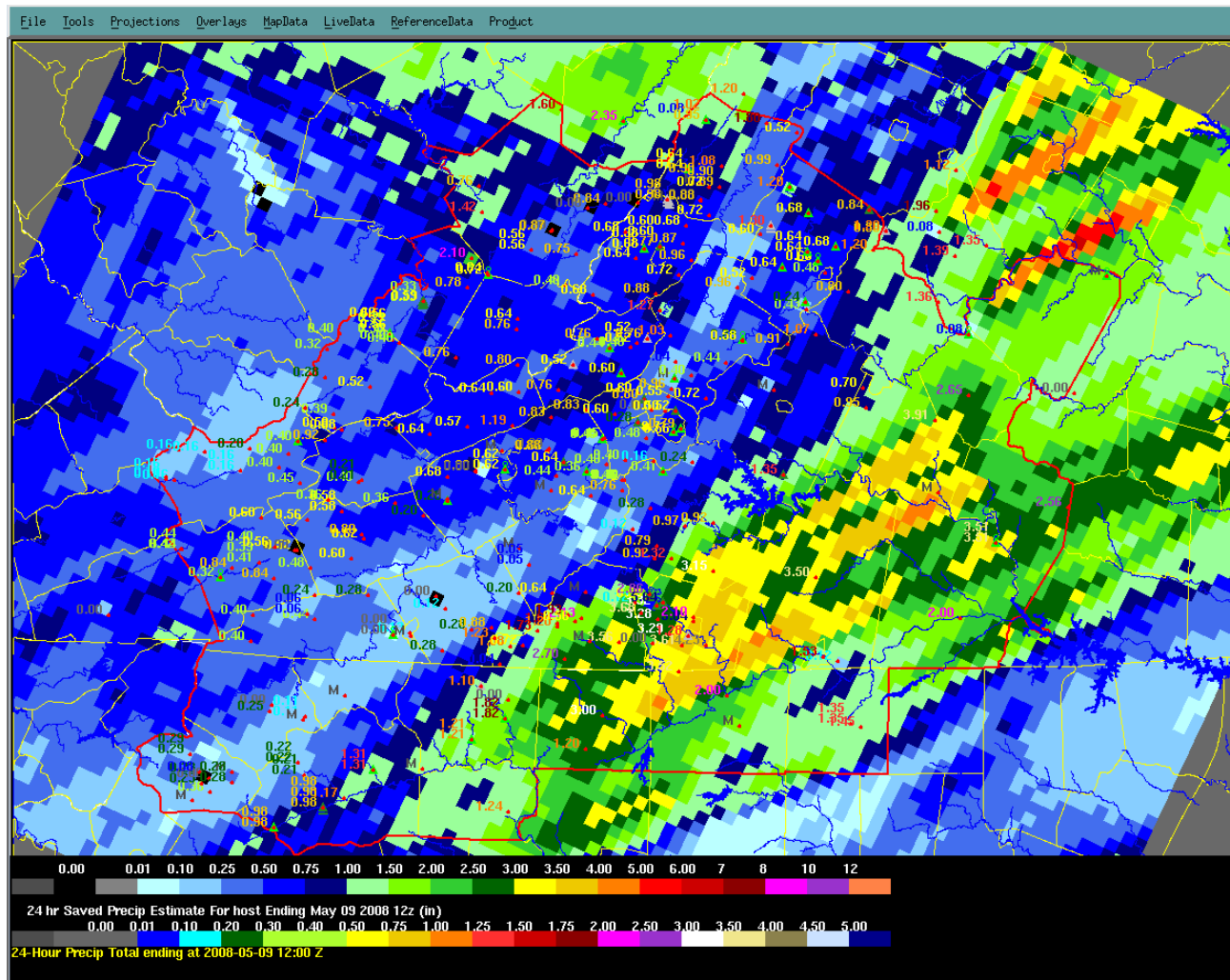
**|Signature:** Peter Corrigan

**Summary:** Some minor river flooding occurred during early May 2008, but overall precipitation was below normal across the Blacksburg Hydrologic Service Area (HSA). The sub-normal monthly rainfall renewed drought concerns, especially in western North Carolina where drought has been most persistent and severe for about a year. Preliminary rainfall data from 71 of 77 cooperative stations showed mean precipitation of 3.18 inches versus the average (1971-2000 mean) for May of 4.42 inches, or 72 per cent of normal. Monthly totals ranged from a low of 1.04" at Galax, VA (GAXV2) in Galax City to a high of 5.94" at Concord, VA (CONV2) in Campbell County. Precipitation was generally highest over the North Carolina and Virginia piedmont counties and lowest in portions of the southern Virginia Blue Ridge and North Carolina mountains. Temperatures were very close to the long-term average in the mountains but slightly cooler than normal at the piedmont locations. Monthly means ranged from a low mean of 58.5°F at Blacksburg (-0.4°) to a high mean of 64.2°F at both Danville (- 2.9°) and Roanoke (+0.4°).

A significant severe weather event with pockets of flash flooding occurred May 8-9 as an upper low tracked across the region. With substantial shear in place and precipitable water from 1.4 to 1.7” (170% of normal) many storms became severe as well as heavy rain producers. Rainfall was heaviest in the piedmont of Virginia as storms lined up along a boundary for several hours. A Flash Flood Warning was first issued for Henry County and Martinsville at 1015 PM on May 8. Subsequent warnings were issued for parts of Campbell, Pittsylvania (including Danville), Franklin, Appomattox and Patrick counties in Virginia and Caswell, Rockingham and Stokes counties in North Carolina (total of 9). Flooding reports were received from several counties including a mudslide along Route 58 in Pittsylvania County, water over several roads in Martinsville, and in Pittsylvania County. Fairly serious flooding was also reported in Danville where Fall Creek flooded several streets and necessitated some evacuations. Table 1 below shows the top 10 rain gage amounts, while Figure 1 below show the MPE rainfall estimate across the entire HSA. The heavy rains in the upper Dan River basin produced heavy runoff and rapid rises along the Dan from above Wentworth all the way downstream to South Boston. This prompted a River Flood Warning for the Dan from Danville to South Boston with forecasts to exceed Moderate Flood Stage at all three forecast points (Danville, Paces and South Boston). Flooding was also reported on the Dan River above Wentworth with a road closed near Madison, NC due to the high water along the Dan. Eventual peak crests (see E-3 section below) fell short of Moderate Flood Stage at all three forecast points, reaching only minor flood levels.

**Table 1 – Top 10 24-hour Rain Gage Amounts: RNK HSA – vt. 1200 UTC, 5/9/08**

SHEF ID	STATION	COUNTY	TYPE	RAINFALL
SRVV2	SMITH RIVER SG	HENRY	IFLOWS	5.64
JOEV2	JONES CREEK	HENRY	IFLOWS	5.04
LWSV2	LOWER SMITH	HENRY	IFLOWS	4.23
CONV2	CONCORD	CAMPBELL	COOP	3.91
SAVV2	SANVILLE	HENRY	IFLOWS	3.68
CHSV2	CHESTNUT KNOB	HENRY	IFLOWS	3.61
CRTV2	CRITZ	PATRICK	IFLOWS	3.56
MAOV2	MARROWBONE RES.	HENRY	IFLOWS	3.52
RNDV2	RANDOLPH	HALIFAX	DCP	3.51
CHMV2	CHATHAM	PITTSYLVANIA	COOP	3.50



**Fig. 1: 24-hour MPE and gage rainfall – vt. 1200 UTC, 9 May 2008**

Conditions turned much drier during the second half of May, with only a few episodes of light rainfall. May 18 saw passage of an upper-level disturbance and a surface front that produced mostly light rainfall across the area. 24-hour amounts ending 1200 UTC on May 19 ranged from less than 0.10" in the eastern half of the service area to 0.50-0.75" in the western mountains. A slow-moving front pushed through the area on May 27-28 triggering showers and a few thunderstorms. 24-hour rainfall ending 1200 UTC on the 28<sup>th</sup> ranged from zero over the central HSA to 0.25-0.75" in the southeast piedmont counties. The western tier of counties received less than 0.10". The only rain gage amounts over a half-inch were Yanceyville Coop (YAVN7) 0.57", Caswell Game Lands (CGLN7) 0.55", and South Boston Coop (SOBV2) 0.53". Widespread light to moderate rainfall continued during much of the 28th as the boundary slowly pushed southward. Most the northern and eastern HSA had less than 0.10", with 0.25-0.50" over the central and southwestern sections. Isolated locations in both Pulaski and Ashe counties had closer to an inch and top rain gage amounts included 1.40" at Walker House IFLOWS (WKHV2), 1.00" at Peak Creek IFLOWS (PCRV2), 0.96" at Witts Orchard (WITV2) and 0.80" at Shawsville SG IFLOWS (SHAV2).

This May marked one full year that portions of the HSA were in at least D2 drought on the U.S. Drought Monitor (USDM). Moreover, the dry second half of the month halted most of the improvements in the drought situation that early May rains produced. By the May 29<sup>th</sup> issuance of the USDM, D3 or Extreme drought had again pushed back into the far southwestern HSA with D2 (Severe) almost reaching the Virginia border. D1 (Moderate) extended north into parts of the New and Upper Roanoke river valleys, with D0 or better still prevailing across the northern and western HSA.

#### Non-Routine Hydrologic Product Summary:

Flood/Flash Flood Watches – (FFARNK - issuances): 1  
 Flood Advisories (Urban/Small Stream - FLSRNK): 2  
 Flash Flood Warnings – (FFWRNK - counties): 22  
 Areal Flood Warnings (FLWRNK): 11  
 River Flood Warnings (FLWRNK - forecast points): 4

NWS FORM E-3 U.S. DEPARTMENT OF COMMERCE NOAA, NATIONAL WEATHER SERVICE <b>FLOOD STAGE REPORT</b>		HYDROLOGIC SERVICE AREA: <b>Blacksburg, VA (RNK)</b>				
		MONTH: <b>May</b> YEAR: <b>2008</b>				
RIVER AND STATION	FLOOD STAGE (FEET)	ABOVE FLOOD STAGE		CREST		
		FROM	TO	STAGE (FEET)	DATE	TIME (UTC)

#### Dan River

<b>Danville</b> (DVLV2)	17	5/9/08	5/10/08	19.21	5/9/08	1830
<b>Paces</b> (PCEV2)	20	5/10/08	5/10/08	20.47	5/10/08	1830

<b>South Boston</b> (SBNV2)	19	5/10/08	5/11/08	23.11	5/11/08	0030
<b>Roanoke River</b>						
<b>Randolph</b> (RNDV2)	21	5/9/08	5/10/08	21.47	5/10/08	0145

cc:

MIC RNK

NWS HIC

NWS ER

SERFC

LMRFC

OHRFC

MARFC