

PRECIPITATION

Precipitation data were obtained from long-term monitoring stations operated by the U.S. Department of Commerce. The data are published as Climatological Data–Pennsylvania, and as Climatological Data–New York by the National Oceanic and Atmospheric

Administration (NOAA) at the National Climatic Data Center in Asheville, North Carolina. Quarterly and annual data from these sources were compiled across the subbasins of the Susquehanna River Basin and are reported in Table 4 for Group A sites.

Table 4. Summary for Annual Precipitation for Selected Areas in the Susquehanna River Basin, Calendar Year 2006

River Location	Season	Calendar Year 2006 Precipitation inches	Average Long-term Precipitation inches	Departure From Long-term inches
Susquehanna River above Towanda, Pa.	January-March	7.09	7.45	-0.36
	April-June	14.07	10.69	+3.38
	July-September	13.75	11.33	+2.42
	October-December	<u>11.29</u>	<u>9.09</u>	<u>+2.20</u>
	Yearly Total	46.20	38.56	+7.64
Susquehanna River above Danville, Pa.	January-March	7.21	7.49	-0.28
	April-June	14.48	10.73	+3.75
	July-September	13.76	11.51	+2.25
	October-December	<u>11.18</u>	<u>9.15</u>	<u>+2.03</u>
	Yearly Total	46.63	38.88	+7.75
West Branch Susquehanna River above Lewisburg, Pa.	January-March	7.35	8.23	-0.88
	April-June	13.45	11.03	+2.42
	July-September	14.81	12.49	+2.32
	October-December	<u>10.28</u>	<u>9.58</u>	<u>+0.70</u>
	Yearly Total	45.89	41.33	+4.56
Juniata River above Newport, Pa.	January-March	6.02	7.73	-1.71
	April-June	11.85	9.47	+2.38
	July-September	10.87	10.01	+0.86
	October-December	<u>9.54</u>	<u>8.89</u>	<u>+0.65</u>
	Yearly Total	38.28	36.10	+2.18
Susquehanna River above Marietta, Pa.	January-March	7.15	8.11	-0.96
	April-June	14.55	10.70	+3.85
	July-September	12.91	11.63	+1.28
	October-December	<u>10.77</u>	<u>9.34</u>	<u>+1.43</u>
	Yearly Total	45.38	39.78	+5.60
Conestoga River above Conestoga, Pa.	January-March	7.12	8.90	-1.78
	April-June	16.23	10.46	+5.77
	July-September	11.78	12.64	-0.86
	October-December	<u>11.70</u>	<u>10.42</u>	<u>+1.28</u>
	Yearly Total	46.83	42.42	+4.41

WATER DISCHARGE

Water discharge data were obtained from the USGS and are listed in Table 5. Monthly water discharge ratios are plotted in Figure 3 for all sites. The water discharge ratio is the actual flow for the time period divided by the LTM for the same time period. Thus, a value of one equals the 2006 flow being the same as the LTM, while a value of three equals the 2006 flow being three times the volume of the LTM. Two major discharge events occurred in 2006, including Tropical Storms Ernesto and Alberto,

leading to annual water discharges that were above the LTM for all sites except Lewisburg and Newport. Figure 3 shows these effects for June, in which flows ranged from 2.5 times the LTM at Conestoga and Marietta to 3.5 times the LTM at Towanda and Danville. High flows at Towanda and Danville were a result of the dramatic flooding in New York, resulting in massive loadings of TP and SS at these sites. Alberto's affects were most apparent at Conestoga during November, as can be seen at the bottom of Figure 3.

Table 5. Annual Water Discharge, Calendar Year 2006

Site	Years of Record	Long-term Annual Mean cfs ¹	2006	
			Mean cfs	Percent of LTM ²
Towanda	18	11,899	15,404	129
Danville	22	16,511	21,856	132
Lewisburg	22	10,966	10,800	98
Newport	22	4,428	3,581	81
Marietta	20	39,255	44,624	114
Conestoga	22	680	802	118

¹ Cubic feet per second ² Long-term mean

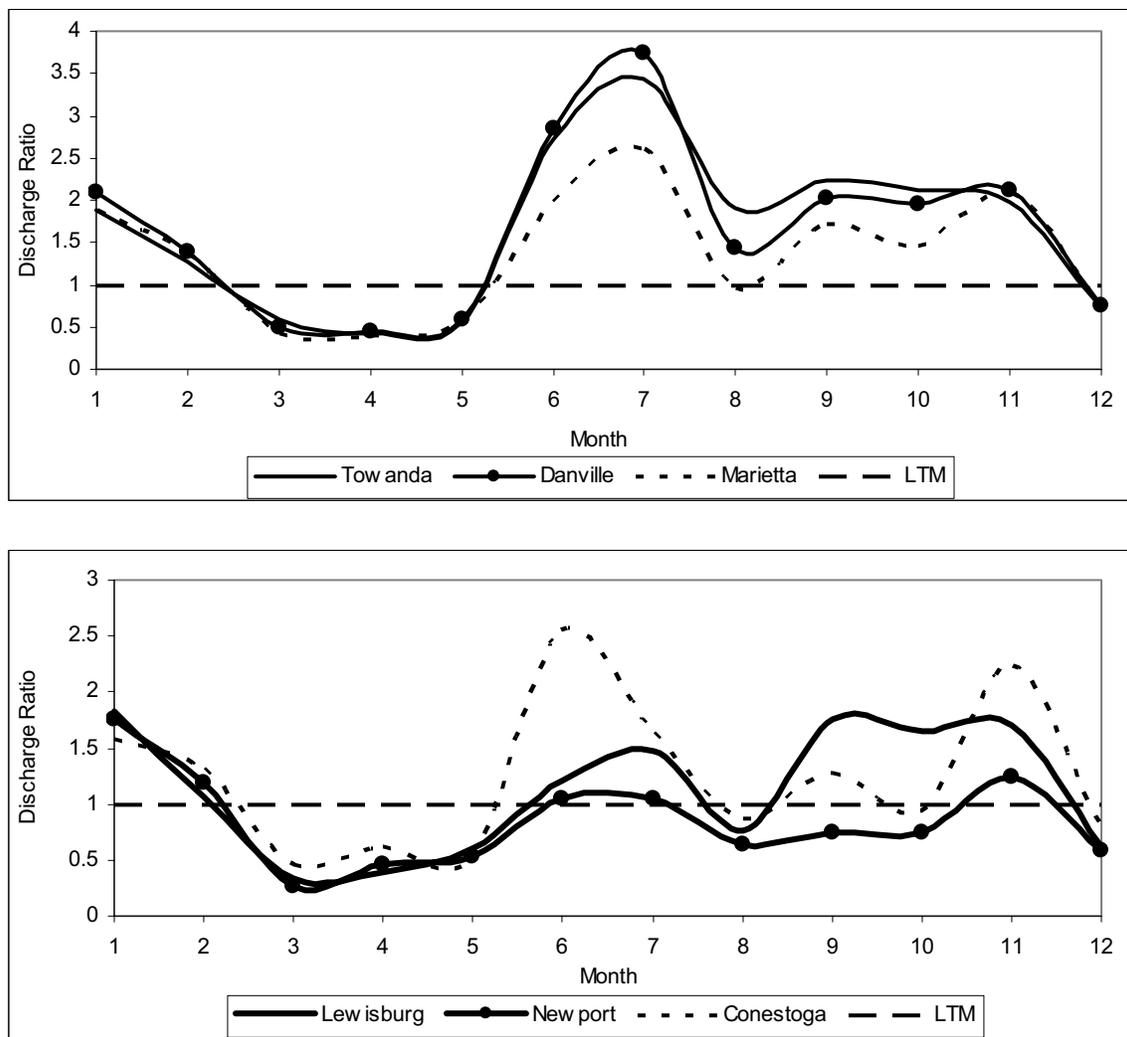


Figure 3. Discharge Ratios for Long-term Sites, Susquehanna Mainstem Sites (top) and Tributaries (bottom)