

Flood Event of 9/17/2004 - 9/20/2004

Brandywine

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Chadds Ford	9.00	9/19/2004	9.86	7,370	Minor	Christina	Brandywine Creek	Delaware	Delaware

Chemung

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Chemung	16.00	9/18/2004	18.45	66,900	Minor	Chemung	Chemung River	Chemung	Chemung
Elmira	12.00	9/18/2004	13.59	45,100	Minor	Chemung	Chemung River	Chemung	Chemung
Mansfield	12.00	9/18/2004	14.21	20,900	Major	Chemung	Tioga River	Tioga	Tioga
Tioga Junction	15.00	9/17/2004	15.33	11,000	Minor	Chemung	Tioga River	Tioga	Tioga

Delaware

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Cooks Falls	10.00	9/18/2004	17.67	42,100	Moderate	Delaware	Beaver Kill	Delaware	Delaware
Fishs Eddy	13.00	9/18/2004	21.40	56,300	Major	Delaware	Delaware River	Delaware	Delaware
Harvard	10.00	9/18/2004	16.07	20,600	Major	Delaware	East Branch Delaware River	Delaware	Delaware
Hawley	11.00	9/18/2004	14.49	17,700	Moderate	Lackawaxen	Lackawaxen River	Wayne	Wayne
Minisink Hills	10.00	9/19/2004	18.27	39,200	Major	Brodhead	Brodhead Creek	Monroe	Monroe
Shoemakers	6.00	9/18/2004	7.27	5,330	Moderate	Bush Kill	Bush Kill	Monroe	Cambria

Walton	9.50	9/18/2004	13.41	15,200	Minor	Delaware	West Branch Delaware River	Delaware	Delaware
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Juniata

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Huntingdon	12.00	9/18/2004	17.89	45,700	Major	Juniata	Juniata River	Huntingdon	Huntingdon
Lewistown	23.00	9/19/2004	31.68	74,600	Major	Juniata	Juniata River	Mifflin	Mifflin
Mapleton Depot	20.00	9/18/2004	23.76	64,000	Minor	Juniata	Juniata River	Huntingdon	Huntingdon
Newport	22.00	9/19/2004	23.74	96,200	Minor	Juniata	Juniata River	Perry	Perry
Saxton	17.00	9/18/2004	20.02	39,200	Moderate	Juniata	Raystown Branch Juniata River	Bedford	Bedford
Shirleysburg	10.00	9/18/2004	18.50	34,200	Moderate	Juniata	Aughwick Creek	Huntingdon	Huntingdon
Spruce Creek	8.00	9/18/2004	15.46	22,100	Major	Juniata	Little Juniata River	Huntingdon	Huntingdon
Williamsburg	12.00	9/18/2004	19.46	18,000	Major	Juniata	Frankstown Branch Juniata River	Blair	Blair

Lehigh

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Bethlehem	16.00	9/18/2004	19.70	56,700	Minor	Lehigh	Lehigh River	Lehigh	Northampton
Lehighton	10.00	9/18/2004	12.01	21,200	Moderate	Lehigh	Lehigh River	Carbon	Carbon
Walnutport	8.00	9/18/2004	12.30	40,000	Moderate	Lehigh	Lehigh River	Northampton	Northampton

Main Stem Delaware

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
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Barryville	17.00	9/18/2004	24.09	112,000	Moderate	Main Stem Delaware	Delaware River	Sullivan	Sullivan
Belvidere	22.00	9/19/2004	24.80	184,000	Moderate	Main Stem Delaware	Delaware River	Warren	Warren
Callicoon	12.00	9/18/2004	17.33	107,000	Major	Main Stem Delaware	Delaware River	Wayne	Sullivan
Delaware Water Gap	21.00	9/19/2004	30.32	176,000	Major	Main Stem Delaware	Delaware River	Warren	Monroe
Easton (Phillipsburg, NJ)	22.00	9/19/2004	33.35	-9,999	Major	Main Stem Delaware	Delaware River	Warren	Northampton
Frenchtown	16.00	9/19/2004	20.70	-9,999	Major	Main Stem Delaware	Delaware River	Hunterdon	Hunterdon
Hale Eddy	11.00	9/18/2004	12.83	17,500	Minor	Main Stem Delaware	West Branch Delaware River	Delaware	Delaware
Montague	25.00	9/18/2004	28.37	168,000	Moderate	Main Stem Delaware	Delaware River	Pike	Sussex
New Hope (Lambertville, NJ)	13.00	9/19/2004	16.50	-9,999	Major	Main Stem Delaware	Delaware River	Hunterdon	Bucks
Port Jervis	18.00	9/18/2004	19.52	151,000	Minor	Main Stem Delaware	Delaware River	Pike	Orange
Riegelsville	22.00	9/19/2004	30.95	216,000	Major	Main Stem Delaware	Delaware River	Warren	Bucks
Stockton	18.00	9/19/2004	22.50	-9,999	Moderate	Main Stem Delaware	Delaware River	Hunterdon	Hunterdon
Trenton	20.00	9/19/2004	23.41	201,000	Moderate	Main Stem Delaware	Delaware River	Mercer	Mercer
Washington Crossing	20.00	9/19/2004	22.00	-9,999	Moderate	Main Stem Delaware	Delaware River	Mercer	Bucks

Main Stem Susquehanna

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Bloomsburg	19.00	9/19/2004	27.07	-9,999	Moderate	Upper Main Stem Susquehanna	Susquehanna River	Columbia	Columbia
Camp Hill	7.00	9/18/2004	8.78	3,600	Minor	Yellow Breeches	Yellow Breeches Creek	Cumberland	Cumberland

Conowingo	23.50	9/19/2004	30.07	620,000	Major	Lower Main Stem Susquehanna	Susquehanna River	Harford	Cecil
Danville	20.00	9/19/2004	26.22	220,000	Moderate	Upper Main Stem Susquehanna	Susquehanna River	Montour	Montour
Harper Tavern	9.00	9/19/2004	17.36	25,000	Major	Swatara	Swatara Creek	Lebanon	Lebanon
Harrisburg	17.00	9/19/2004	24.40	557,000	Major	Lower Main Stem Susquehanna	Susquehanna River	Dauphin	Dauphin
Hershey	7.00	9/19/2004	14.27	26,000	Major	Swatara	Swatara Creek	Dauphin	Dauphin
Hogestown	8.00	9/19/2004	11.35	12,600	Moderate	Conodoguinet	Conodoguinet Creek	Cumberland	Cumberland
Marietta	49.00	9/20/2004	56.28	577,000	Major	Lower Main Stem Susquehanna	Susquehanna River	Lancaster	Lancaster
Meshoppen	27.00	9/18/2004	35.27	188,000	Moderate	Upper Main Stem Susquehanna	Susquehanna River	Wyoming	Wyoming
Middletown (Old Site)	11.00	9/19/2004	19.50	-9,999	Major	Lower Main Stem Susquehanna	Swatara Creek	Dauphin	Dauphin
Monroeton	14.00	9/18/2004	18.99	23,900	Major	Upper Main Stem Susquehanna	Towanda Creek	Bradford	Bradford
Old Forge	11.00	9/18/2004	16.70	23,800	Major	Lackawanna	Lackawaxen River	Lackawanna	Lackawanna
Penns Creek	8.00	9/18/2004	12.27	16,000	Major	Penns Creek	Penns Creek	Snyder	Snyder
Shermans Dale	9.00	9/18/2004	16.31	21,700	Major	Lower Main Stem Susquehanna	Sherman Creek	Perry	Perry
Sunbury	24.00	9/19/2004	30.44	427,000	Moderate	Lower Main Stem Susquehanna	Susquehanna River	Snyder	Northumberland
Towanda	16.00	9/18/2004	22.26	154,000	Moderate	Upper Main Stem Susquehanna	Susquehanna River	Bradford	Bradford
Tunkhannock	11.00	9/18/2004	19.69	36,500	Major	Upper Main Stem Susquehanna	Tunkhannock Creek	Wyoming	Wyoming
Wilkes-Barre	22.00	9/19/2004	34.96	227,000	Major	Upper Main Stem Susquehanna	Susquehanna River	Luzerne	Luzerne

North Branch Susquehanna

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Bainbridge	13.00	9/18/2004	15.11	22,700	Minor	North Branch Susquehanna	North Branch Susquehanna River	Chenango	Chenango
Conklin	11.00	9/18/2004	19.01	54,700	Moderate	North Branch Susquehanna	North Branch Susquehanna River	Broome	Broome
Owego	30.00	9/18/2004	31.04	89,800	Minor	North Branch Susquehanna	North Branch Susquehanna River	Tioga	Tioga
Vestal	18.00	9/18/2004	25.94	77,600	Moderate	North Branch Susquehanna	North Branch Susquehanna River	Broome	Broome
Waverly	11.00	9/18/2004	18.63	89,400	Moderate	North Branch Susquehanna	North Branch Susquehanna River	Bradford	Tioga

Passaic

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Lodi	6.00	9/18/2004	7.33	2,450	Moderate	Passaic	Saddle River	Bergen	Bergen
Mahwah	8.00	9/18/2004	8.45	3,640	Minor	Passaic	Ramapo River	Bergen	Bergen
Pompton Lakes	9.00	9/18/2004	13.56	6,390	Missing	Passaic	Ramapo River	Passaic	Passaic

Potomac

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Fairview	10.00	9/19/2004	13.75	13,900	Moderate	Potomac	Conococheague Creek	Washington	Washington

Schuylkill

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Berne	12.00	9/18/2004	15.05	24,900	Moderate	Schuylkill	Schuylkill River	Berks	Berks

Graterford	11.00	9/18/2004	14.80	26,500	Moderate	Schuylkill	Perkiomen Creek	Montgomery	Montgomery
Philadelphia	11.00	9/18/2004	11.33	51,100	Minor	Schuylkill	Schuylkill River	Philadelphia	Philadelphia
Pottstown	13.00	9/19/2004	14.59	27,800	Minor	Schuylkill	Schuylkill River	Montgomery	Montgomery
Reading	13.00	9/18/2004	16.24	29,700	Moderate	Schuylkill	Schuylkill River	Berks	Berks

South Branch Potomac

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Moorefield	10.00	9/18/2004	10.71	-9,999	Minor	South Branch Potomac	South Fork South Branch Potomac River	Hardy	Hardy

West Branch Susquehanna

Site	Flood Stage	Date	Crest	Flow	Category	Basin	Stream	County of Gage	County of Forecast Point
Beech Creek Station	11.00	9/18/2004	15.96	13,400	Major	West Branch Susquehanna	Bald Eagle Creek	Clinton	Clinton
Jersey Shore	26.00	9/18/2004	30.74	197,300	Major	West Branch Susquehanna	West Branch Susquehanna River	Lycoming	Lycoming
Lewisburg	18.00	9/19/2004	26.01	209,000	Moderate	West Branch Susquehanna	West Branch Susquehanna River	Northumberland	Union
Lock Haven	21.00	9/18/2004	28.13	111,000	Major	West Branch Susquehanna	West Branch Susquehanna River	Clinton	Clinton
Loyalsockville	12.00	9/18/2004	15.24	40,400	Major	West Branch Susquehanna	Loyalsock Creek	Lycoming	Lycoming
Milton	19.00	9/19/2004	27.94	-9,999	Major	West Branch Susquehanna	West Branch Susquehanna River	Union	Northumberland
Montgomery	20.00	9/19/2004	28.80	-9,999	Major	West Branch Susquehanna	West Branch Susquehanna River	Lycoming	Lycoming
Muncy	20.00	9/19/2004	28.80	-9,999	Major	West Branch Susquehanna	West Branch Susquehanna River	Lycoming	Lycoming
Renovo	16.00	9/18/2004	21.84	128,000	Moderate	West Branch Susquehanna	West Branch Susquehanna River	Clinton	Clinton

Sinnemahoning	17.00	9/18/2004	17.78	42,900	Minor	West Branch Susquehanna	Sinnemahoning Creek	Cameron	Cameron
Watsonstown	23.00	9/19/2004	28.80	-9,999	Moderate	West Branch Susquehanna	West Branch Susquehanna River	Northumberland	Northumberland
Williamsport	20.00	9/18/2004	27.79	203,000	Moderate	West Branch Susquehanna	West Branch Susquehanna River	Lycoming	Lycoming

Weather Summary

On September 16th, a situation similar to that of the previous three floods began to unfold; Hurricane Ivan slammed into the Alabama/Mississippi coast as a cold front with its origins in Canada began to sweep across the Gulf Coast. As the dying tropical system became absorbed into the cold front on the 17th and formed the center of a new low along the boundary, precipitation associated with the system spread from Maine to North Carolina with its heaviest rain falling over Pennsylvania Basins. The combination of heavy rains and subsequent flooding from Charley, Gaston and Frances no more than a week earlier, provided Ivan with the conditions that would prove to be disastrous as it trekked east-northeastward from western North Carolina to Delaware, then back into the open waters of the Atlantic Ocean. Between September 17 and 18, the remnants of Ivan brought NY Basins including the Chemung, North Branch Susquehanna and Upper Delaware 2 - 3 inches, 2.5 - 4 inches and 3.5 - 7.5 inches respectively. Pennsylvania based Susquehanna Basins including the Juniata, Upper Main Stem, Lower Main Stem and West Branch received between 3 and 7 inches while PA Delaware River Basin averages ranged between 4 and 5 inches. For New Jersey, the Passaic and the eastern half of the Delaware Basins received between 1 and 3.5 inches with the highest totals towards the NY border. Further south over West Virginia, precipitation totals near 2 inches across the Upper Potomac Basin.

Crest Statistics and Flood Information

Second flood of 3 that occurred in Sep, 2004
 Fourteenth flood of 16 that occurred in 2004
 Number of Floods at MARFC Forecast Points - 83

Number of Floods Cresting in Minor Range - 18
 Number of Floods Cresting in Moderate Range - 31
 Number of Floods Cresting in Major Range - 33
 Number of Floods Cresting in Missing Range - 1