

**PROVISIONAL -- ANNUAL EXCEEDANCE PROBABILITY FOR PEAK FLOWS ON AUGUST 28 - SEPTEMBER 8, 2011 - TROPICAL STORM IRENE AND LEE - AT SELECTED STREAMGAGES IN MASSACHUSETTS AND RHODE ISLAND**

(Data are provisional and subject to revision)

(Data are only representative of annual exceedance probability at the streamgages for the period of record analyzed and maybe affected by changes in the basin over time, dam and/or reservoir operations, and etc.)

| Station No.                    | Station Name                                     | Drainage area (mi <sup>2</sup> ) | August - September 2011 peak flow (bold indicates new peak of record) |                    |                                | Historical peak flow |                  |                                | Provisional annual peak-flow frequency analysis following Bulletin 17-B guidelines (includes water years 2010 and 2011 peak flows - which are provisional) |                          |  |  |
|--------------------------------|--|----------------------------------|---|--------------------|--------------------------------|----------------------|------------------|--------------------------------|--|--------------------------|--|--|
|                                |  |                                  | Date  | Gage height (ft)   | Discharge (ft <sup>3</sup> /s) | Date                 | Gage height (ft) | Discharge (ft <sup>3</sup> /s) | Start of analysis period (water year)  | Number of years analyzed | Provisional annual exceedance probability (%) <sup>1</sup> | Remarks                                  |
| <b>MASSACHUSETTS</b>           |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| <b>DEERFIELD RIVER BASIN</b>   |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01168500                       | DEERFIELD RIVER AT CHARLEMONT, MA                | 361                              | 8/28/2011   | 20.16              | 53,900                         | 9/21/1938            | 20.17            | 56,300                         | 1914   | 98                       | 2-1  | affected by upstream dams                |
| 01169000                       | NORTH RIVER AT SHATTUCKVILLE, MA                 | 89.0                             | 8/28/2011   | 17.66              | <b>53,100</b>                  | 10/9/2005            | 12.32            | 18,800                         | 1940   | 72                       | <0.2   |  |
| 01169900                       | SOUTH RIVER NEAR CONWAY, MA                      | 24.1                             | 8/28/2011   | 13.77              | <b>12,800</b>                  | 10/9/2005            | 11.90            | 8,770                          | 1967   | 45                       | 1-0.5  |  |
| 01170000                       | DEERFIELD RIVER NEAR WEST DEERFIELD, MA          | 557                              | 8/28/2011   | 23.77              | <b>103,000</b>                 | 4/5/1987             | 17.71            | 61,700                         | 1941   | 71                       | 0.5-0.2  | affected by upstream dams                |
| 01170100                       | GREEN RIVER NEAR COLRAIN, MA                     | 41.4                             | 8/28/2011   | 13.31              | <b>17,500</b>                  | 10/9/2005            | 9.14             | 6,540                          | 1968   | 44                       | 0.2  |  |
| <b>CONNECTICUT RIVER BASIN</b> |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01170500                       | CONNECTICUT RIVER AT MONTAGUE CITY, MA           | 7860                             | 8/28/2011   | 35.93              | 127,000                        | 3/19/1936            | 49.20            | 236,000                        | 1904   | 108                      | 20-10  | affected by upstream dams and diversions |
| 01171500                       | MILL RIVER AT NORTHAMPTON, MA                    | 52.6                             | 8/28/2011   | 16.42 <sup>b</sup> | <b>7,020</b>                   | 8/19/1955            | 11.78            | 6,300                          | 1939   | 73                       | 2-1  |  |
| <b>WESTFIELD RIVER BASIN</b>   |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01181000                       | WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA    | 94.0                             | 8/28/2011   | 17.62              | <b>36,200</b>                  | 10/9/2005            | 14.36            | 28,000                         | 1936   | 76                       | 1-0.5  |  |
| 01183500                       | WESTFIELD RIVER NEAR WESTFIELD, MA               | 497                              | 8/28/2011   | 19.92              | 26,200                         | 8/19/1955            | 34.20            | 70,300                         | 1915   | 97                       | 10-4   | affected by upstream flood-control dams  |
| <b>FARMINGTON RIVER BASIN</b>  |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01185500                       | WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA | 92                               | 8/28/2011   | 10.96              | 14,600                         | 8/19/1955            | 14.06            | 34,300                         | 1914   | 98                       | 2  | may be affected by upstream dam          |
| <b>HOUSATONIC RIVER BASIN</b>  |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01197000                       | EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA   | 57.6                             | 8/28/2011   | 8.20 <sup>a</sup>  | <b>6,410</b>                   | 9/21/1938            | 10.80            | 6,000                          | 1936   | 76                       | 2  | affected by upstream dams                |
| 01197500                       | HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA       | 282.0                            | 9/8/2011  | 10.18              | 7,760                          | 1/1/1949             | 12.08            | 12,200                         | 1914   | 98                       | 10-4   | may be affected by upstream dam          |
| 01198000                       | GREEN RIVER NEAR GREAT BARRINGTON, MA            | 51.0                             | 8/28/2011   | 12.38              | <b>7,450</b>                   | 7/13/1996            | 9.84             | 6,740                          | 1952   | 27 <sup>c</sup>          | 4-2  |  |
| <b>HOOSIC RIVER BASIN</b>      |  |                                  |   |                    |                                |                      |                  |                                |  |                          |  |  |
| 01331500                       | HOOSIC RIVER AT ADAMS, MA                        | 46.7                             | 8/28/2011   | 9.06 <sup>b</sup>  | 2,100                          | 9/21/1938            | 8.25             | 5,080                          | 1932   | 80                       | 10   |  |
| 01332500                       | HOOSIC RIVER NEAR WILLIAMSTOWN, MA               | 126.0                            | 8/28/2011   | 13.75              | 12,900                         | 12/31/1948           | 14.85            | 13,000                         | 1941   | 71                       | 2-1  |  |
| 01333000                       | GREEN RIVER AT WILLIAMSTOWN, MA                  | 42.6                             | 8/28/2011   | 4.95               | 2,280                          | 12/21/1973           | 5.68             | 4,060                          | 1950   | 62                       | 20-10  |  |

<sup>1</sup> Annual exceedance probability: 50% = 2-year recurrence interval, 20% = 5-year recurrence interval, 10% = 10-year recurrence interval, 4% = 25-year recurrence interval, 2% = 50-year recurrence interval, 1% = 100-year recurrence interval, 0.5% = 200-year recurrence interval, and 0.2% = 500-year recurrence interval.

<sup>a</sup> Gage height is lower than the historical peak gage height due to a change in the gage datum.

<sup>b</sup> Gage height is higher than the historical peak gage height due to a change in the gage datum.

<sup>c</sup> Streamgage has been inactive twice for several years during its period of record.

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