

# Current Water Conditions in Massachusetts

## September 12, 2008



- August precipitation was above normal
- August streamflows were above normal and normal
- August ground-water levels were above normal and normal
- August reservoir levels were above normal

### Precipitation Conditions

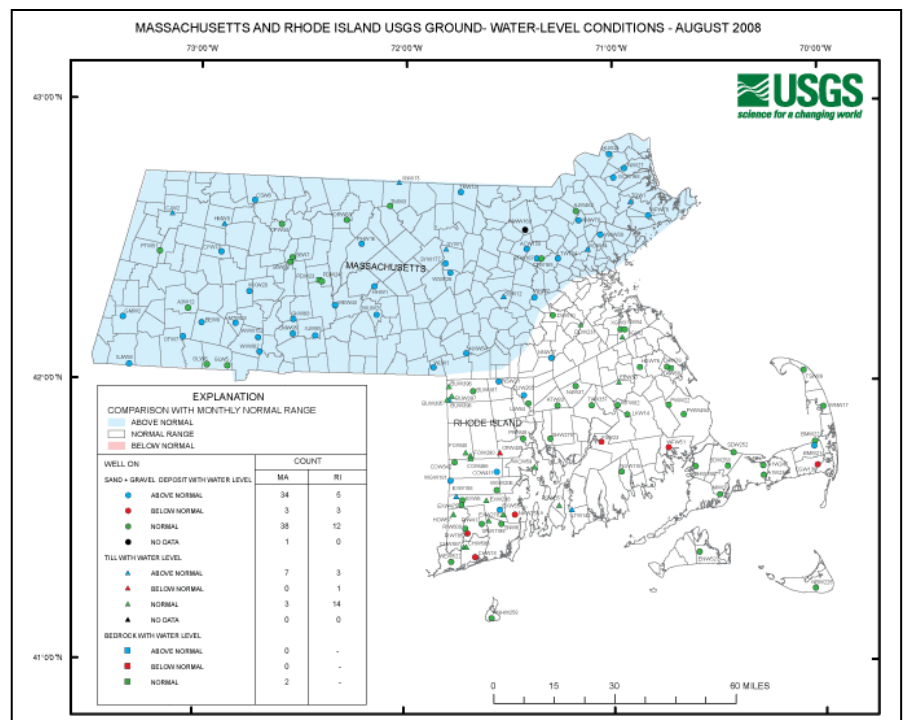
August State-wide precipitation was above normal, equaling an estimated 4.24 inches, which is about 110 percent of the long-term normal for August. The regions of Massachusetts received between 129 percent (Northeast) and 77 percent (Cape and Islands) of normal precipitation during August. Most of the precipitation occurred during the first half of the month which was followed by a relatively dry second half. A table of August 2008 estimated precipitation statistics, based on precipitation data from the Department of Conservation and Recreation and National Weather Service precipitation monitoring networks is attached. A map at the back of this report shows the distribution of August total rainfall in New England.

September rainfall to date ranges from 2 to 6 inches. The higher amounts generally occurred from southwest to northeast across the central part of the State and correspond to the track of maximum rainfall from tropical storm Hanna as it moved across New England on September 6<sup>th</sup> and 7<sup>th</sup>. The Cape Cod and Islands have generally received less than 2 inches this month.

### Ground Water Levels

Ground-water levels reported by the United States Geological Survey (USGS) at the end of August 2008 were generally above normal (blue areas on map) from the northeast to western Massachusetts. In the Southeast and Cape Cod and The Islands groundwater levels were in the normal range (white area of map). Record high groundwater levels for August were measured in 11 wells. The USGS assessment of ground-water levels is based on 124 wells in Massachusetts and Rhode Island with 10 or more years of record.

The USGS ground water level map and a Water Conditions Statement for the end of August 2008 can be viewed at the web site: [http://ma.water.usgs.gov/water/water\\_g.htm](http://ma.water.usgs.gov/water/water_g.htm)



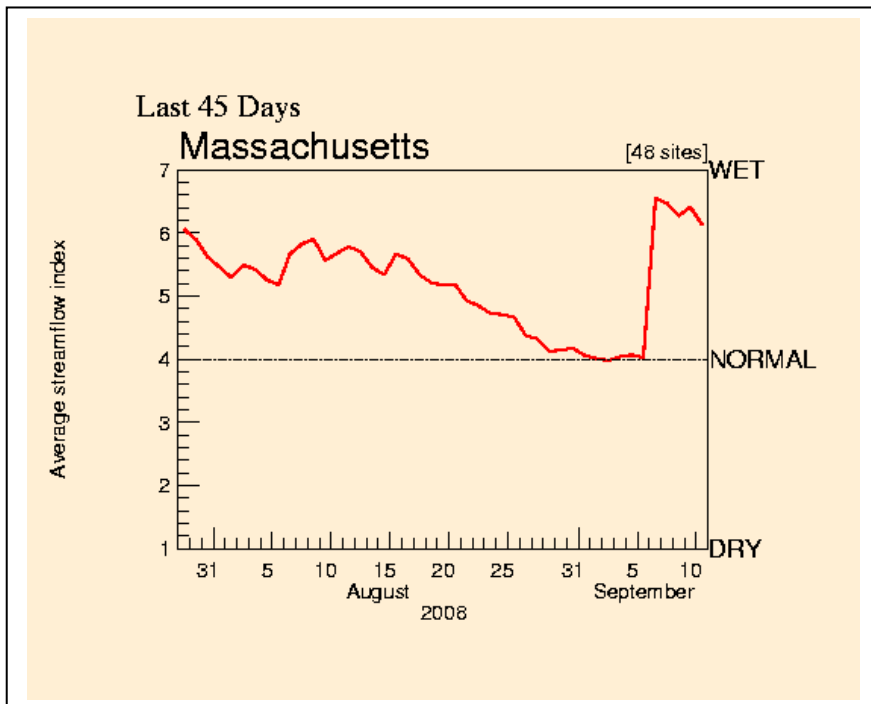
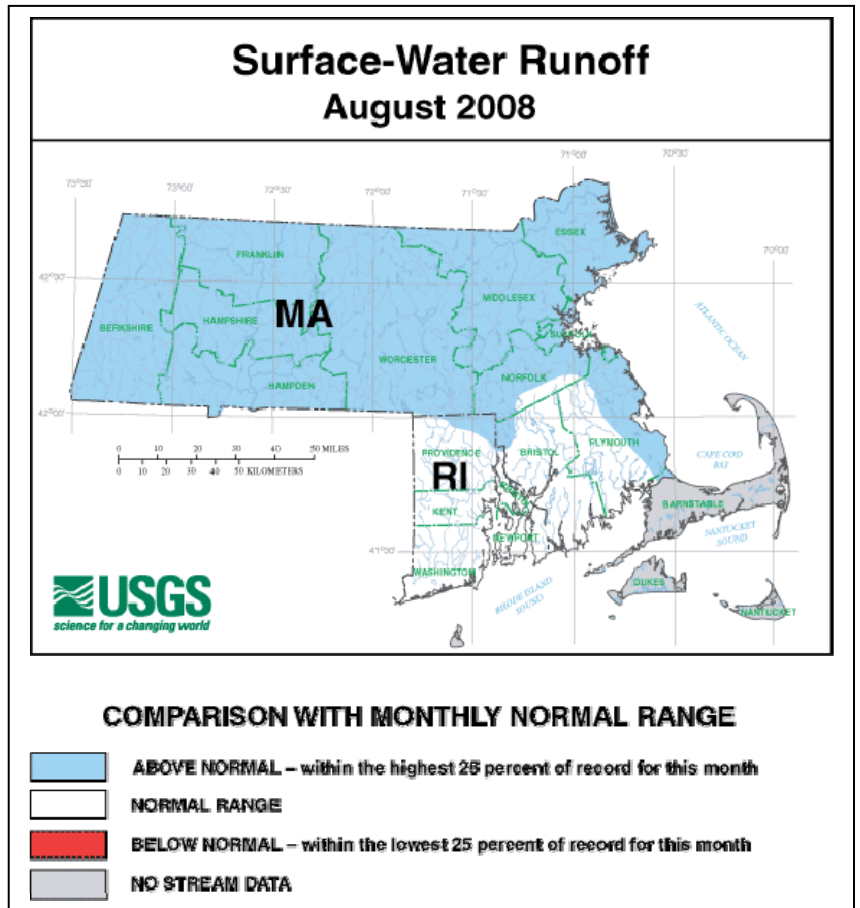
## Stream Flow

During August stream flows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally above normal (blue area on map) in most of the Commonwealth. Flows were normal (white area of map) in several river basins draining the southeastern area of the State.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts as of September 10, 2008. Above normal streamflow at the beginning of August slowly declined after mid month to normal at the end of the month. The rainfall resulting from the passage of tropical storm Hanna on September 6<sup>th</sup> and 7<sup>th</sup> resulted in a sharp rise in streamflow. The graph is a composite of 48 real time gages across the state with a long period of record.

Additional information on streamflow is available from the USGS web page:

<http://ma.water.usgs.gov/water/waters.htm>



### KEY:

- 1 = New record low for day
- 2 = < 10<sup>th</sup> percentile
- 3 = 10<sup>th</sup> – 24<sup>th</sup> percentile
- 4 = 25<sup>th</sup> – 74<sup>th</sup> percentile
- 5 = 75<sup>th</sup> – 89<sup>th</sup> percentile
- 6 = ≥ 90<sup>th</sup> percentile
- 7 = New record high for day

## Water Supply Reservoir Levels

Surface water reservoir percent full values for water supply sources provided by water suppliers are listed below. The reservoir percent full values listed are for the end of August and are reported to be generally above normal for this time of year. Reservoir storage has generally increased during the first part of September.

### August /September 2008 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	96	Beverly/Salem	79.4
Worcester	91 (9/1) 97 (9/8)	Lynn	69.5
Cobble Mt./ Springfield	90	Taunton/New Bedford/Assawompsett	92.4

Note: N.A. Indicates data not available for this report

### Drought Indices/Forecasts

The National Drought Mitigation Center's (NDMC's) September 9, 2008 Drought Monitor Map shown at right, indicates no drought conditions in Massachusetts or New England.

### Standardized Precipitation Index:

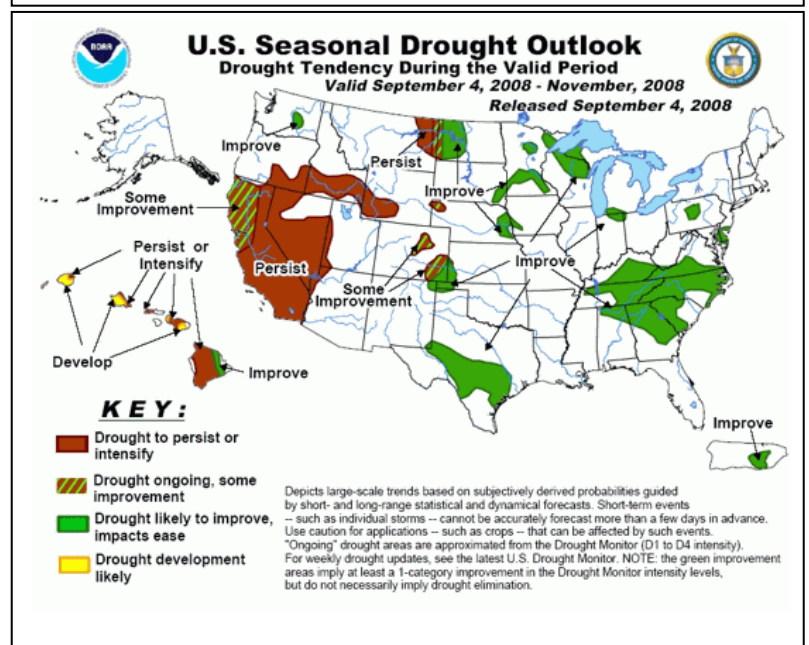
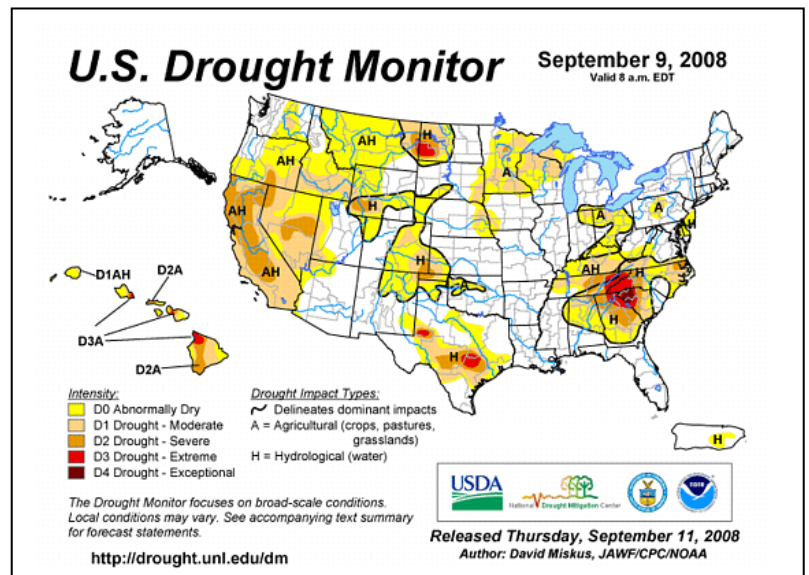
The Western Regional Climate Center's (Desert Research Institute, University and Community College System of Nevada) 1, 3, 6, and 12-Month Standardized Precipitation Index through the end of August shows near normal, very wet, very/moderately wet, and extremely/very wet across Massachusetts.

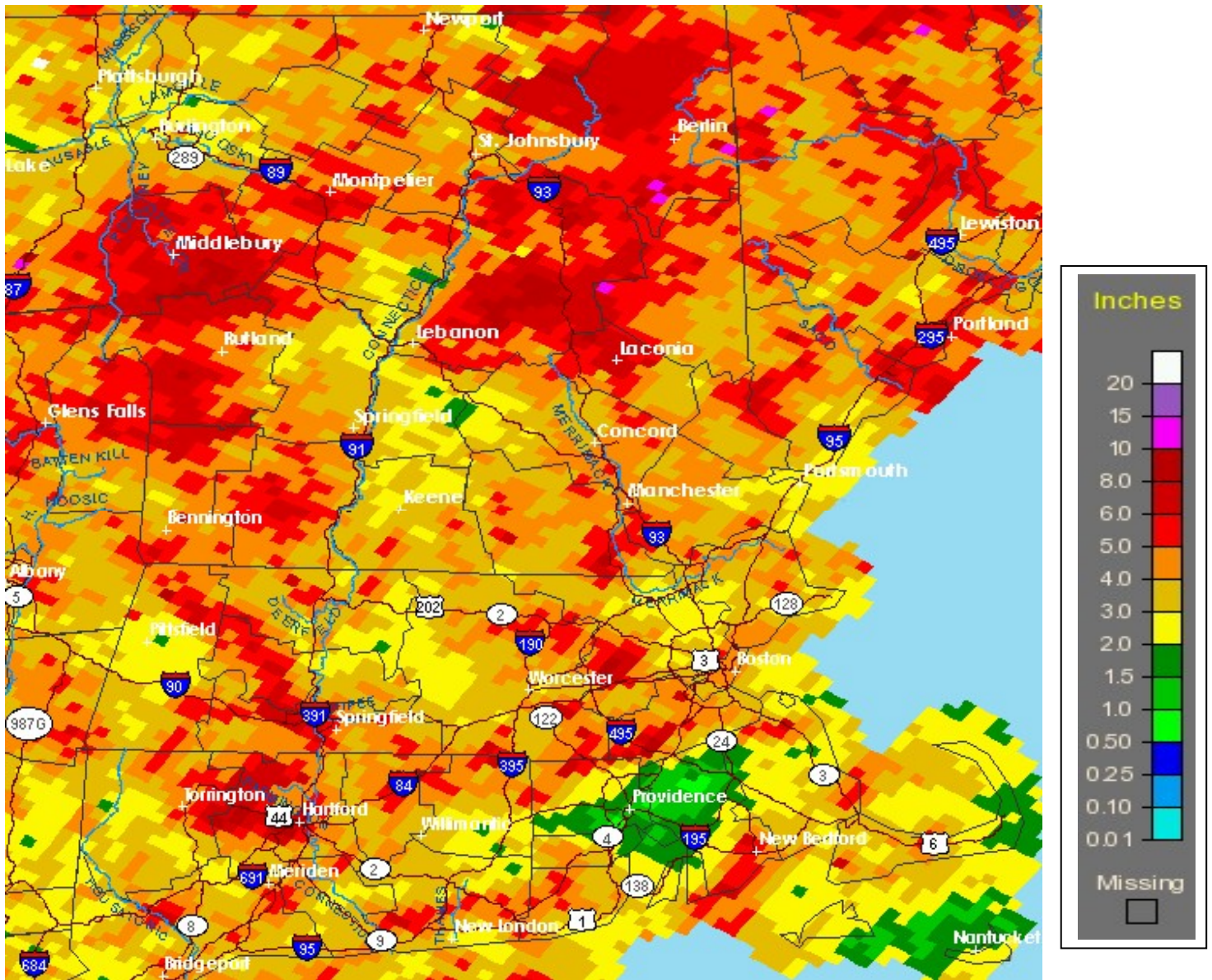
NWS/NOAA's Climate Prediction Center: The U.S. Seasonal Drought Outlook dated September 4, 2008 predicts normal conditions for Massachusetts through November 2008.

### Extended Forecasts

Great weather today and Friday. Period of unsettled weather including showers and thunderstorms are forecast for late Friday through Monday due to low pressure and cold front passages. Rainfall amounts may be enhanced during this period as the remnants of Hurricane Ike move rapidly from Texas to the east coast. Urban and river flooding could be a problem during the weekend. However, at this time there is much uncertainty in predictive models. – Stay tuned to forecasts over the weekend. Next Tuesday and Wednesday should be nice as high pressure approaches.

The National Weather Service Climate Prediction Center's extended 6-10 and 8-14 day forecasts (Sept 15 to Sept 24) predicts below /normal temperatures and above/normal precipitation for Massachusetts. The 1-month extended forecast predicts normal precipitation and temperature.





[http://www.srh.noaa.gov/rfcshare/precip\\_analysis\\_new.php](http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php)

**TOTAL RAINFALL  
AUGUST 2008**



This report was prepared by the Massachusetts Department of Conservation and Recreation. Data were obtained from the sources described in the report and may be preliminary in nature. Additional information, previous and future water conditions reports can be found on our web site: <http://www.mass.gov/dcr/waterSupply/rainfall/>