

Current Water Conditions in Massachusetts

July 11, 2009



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

Precipitation Conditions

June state-wide precipitation equaled an estimated 5.46 inches, which is about 148 percent of the long-term average for the month. The regions of Massachusetts received between 106 percent (Cape Cod and Islands) and 163 percent (Connecticut River region) of average precipitation during June. A table of June 2009 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 June total rainfall in Massachusetts and adjacent areas of New England.

According to the National Weather Service in Taunton, Massachusetts, June 2009 was the sixth coolest June on record in both Boston and Worcester, and likely was the second gloomiest June on record since 1885, based on sunshine records kept at Blue Hills Observatory.

July precipitation to date has generally been above normal for the first week of the month in Massachusetts. There are no tropical systems active in the Atlantic Ocean, and the Atlantic hurricane season has not started in earnest. During heavy thunderstorm activity this week, a microburst was reported in Hopkinton, Massachusetts.

Ground Water Levels

Ground-water levels reported by the United States Geological Survey (USGS) at the end of June 2009 generally were normal and above normal across most of the State. The USGS assessment of ground-water levels is based on 89 wells in Massachusetts with 10 or more years of record. Ground water and surface water conditions in MA drought regions are shown in a table at the end of this report.

The USGS Ground Water Conditions Statement for the end of June 2009 can be viewed at the web site:
http://ma.water.usgs.gov/water/water_g.htm



Explanation - Percentile classes							
●	●	●	●	●	●	●	●
New Low	<10 Much Below Normal	10-24 Below Normal	25-75 Normal	76-90 Above Normal	>90 Much Above Normal	New High	Not Ranked
						○ Real Time	□ Continuous
							△ Periodic Measurements

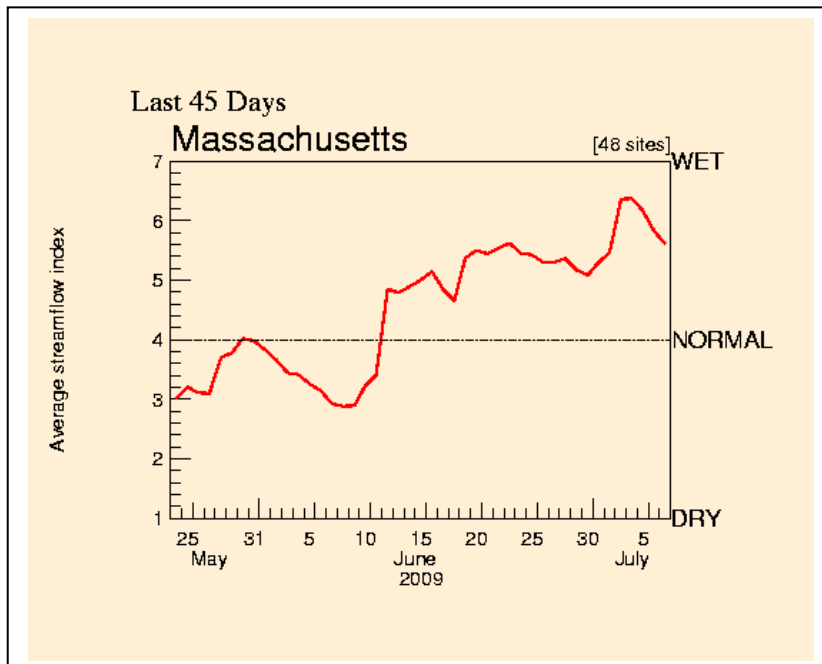
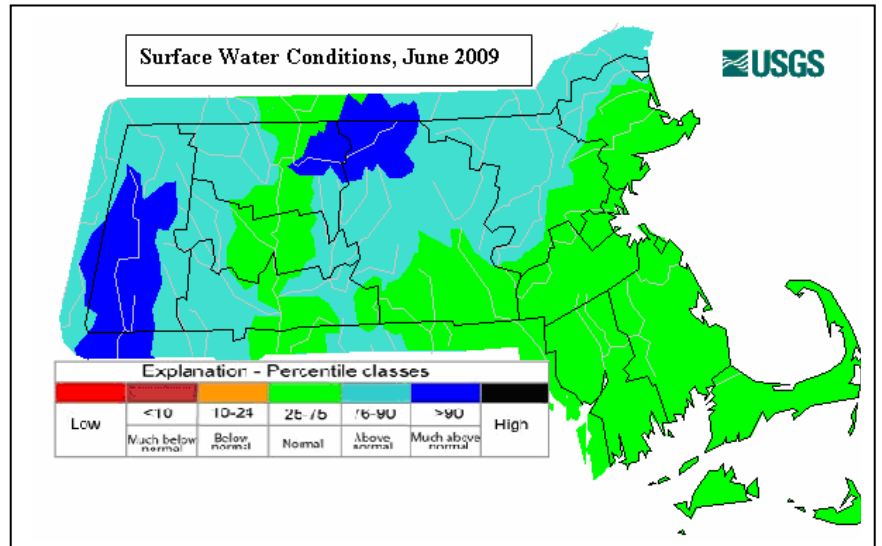
Stream Flow

During June 2009 stream flows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were mostly normal (green areas on map) and above normal (teal areas on map), with some areas much above normal (blue areas on map). The USGS has listed all of the regions of Massachusetts as having normal surface water flow conditions for June.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of May 24, to July 6, 2009. In general, below normal flows in early June rose above normal in mid month and remained above normal through the end of the month. Flows for the first part of July have been above normal. 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/water_s.htm



KEY:

- 1 = New record low for day
- 2 = < 10th percentile
- 3 = 10th – 24th percentile
- 4 = 25th – 74th percentile
- 5 = 75th – 89th percentile
- 6 = ≥ 90th 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 June and are reported to be generally normal to a little above normal for this time of year.

June /July 2009 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	100	Beverly/Salem	95.9
Worcester	100	Lynn	75.0
Cobble Mt./ Springfield	94	Taunton/New Bedford/Assawompsett	104.4

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

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) July 7, 2009 Drought Monitor Map shown at right indicates near normal conditions in all of Massachusetts and New England.

Standardized Precipitation Index:

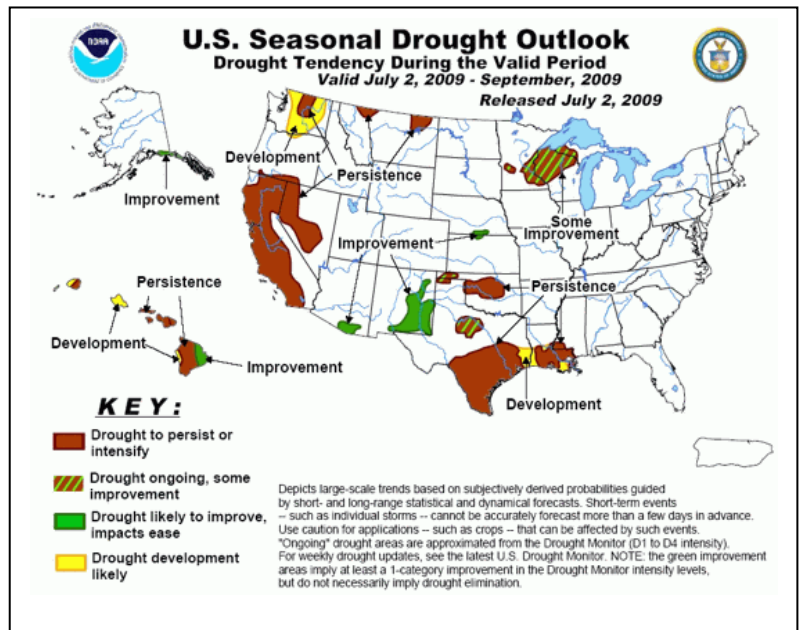
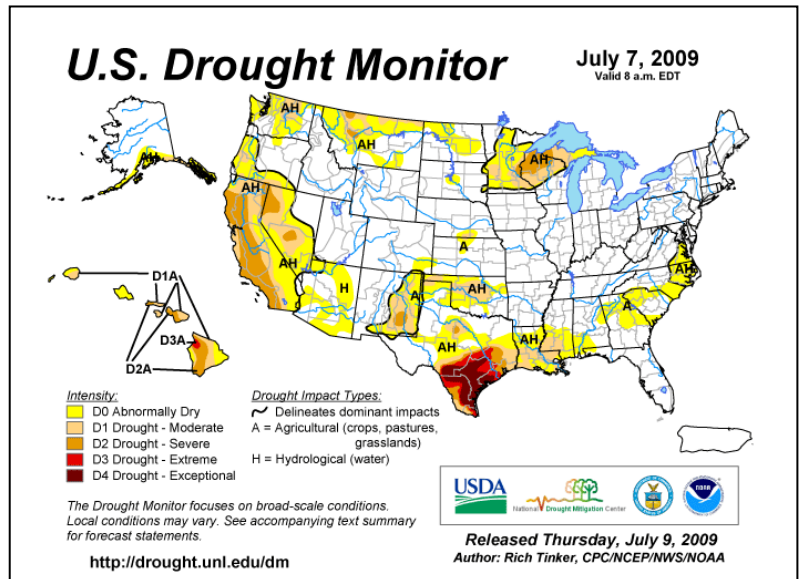
The Western Regional Climate Center's (Desert Research Institute, University and Community College System of Nevada) 1, 3, 6, and 12-Month Standardized Precipitation Index through the end of June shows normal to wet conditions across Massachusetts.

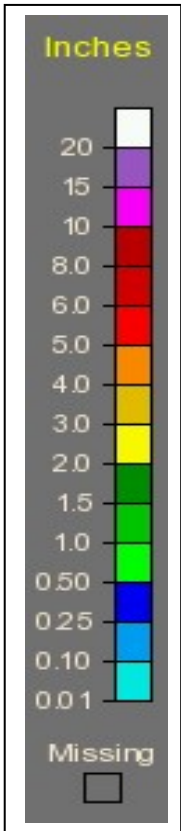
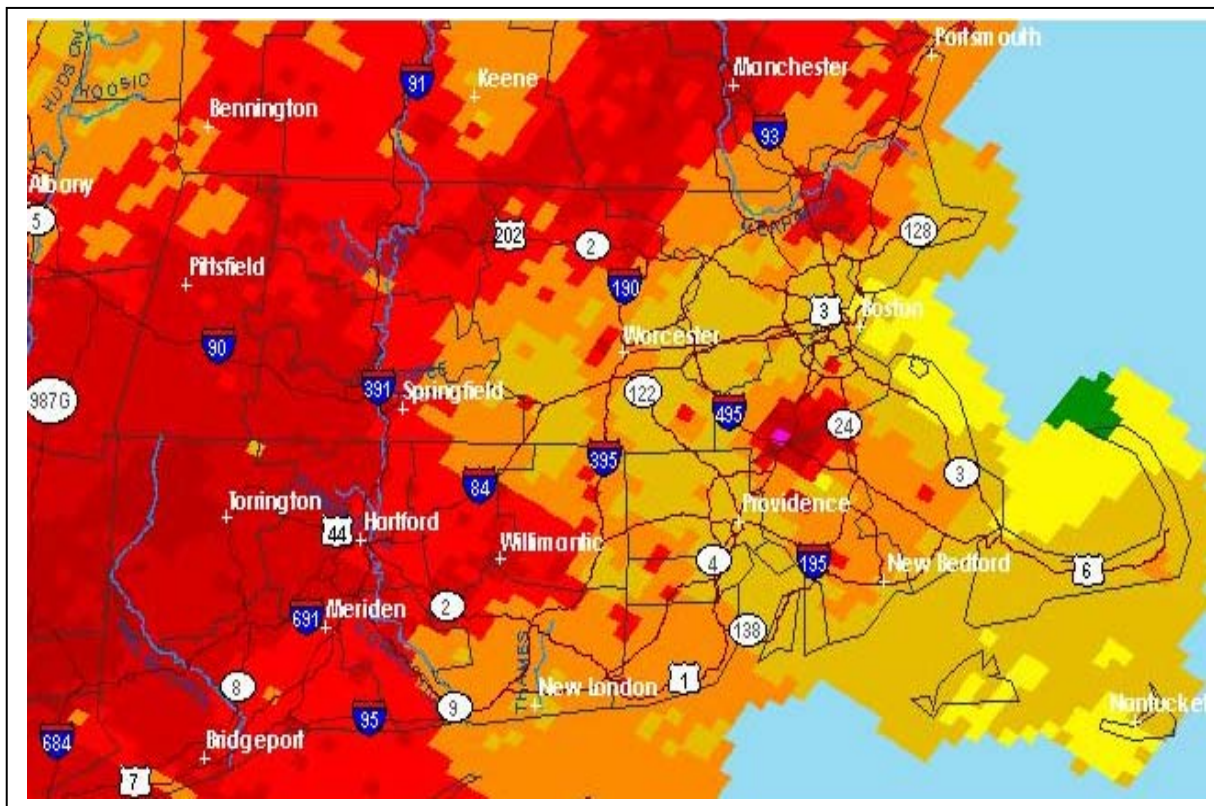
NWS/NOAA's Climate Prediction Center: The U.S. seasonal Drought Outlook dated July 2, 2009 predicts no tendency for drought conditions to develop in Massachusetts through September 2009.

Extended Forecasts

The National Weather Service Climate Prediction Center's extended 6-10, 8-14 day, and 1-month and 3-month forecasts predict below normal temperatures and above normal rainfall. The NWS Climate Prediction Information can be found at:

<http://www.cpc.noaa.gov/index.php>





http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php



**TOTAL RAINFALL
JUNE 2009**

GENERAL WATER CONDITIONS IN MASSACHUSETTS - JUNE 2009
EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	Normal	Normal
Southeast	Normal	Normal
Northeast	Above Normal	Normal
Central	Above Normal	Normal
Connecticut River	Above Normal	Above Normal
Western	Above Normal	Above Normal

Note: Surface- and ground-water conditions for individual streamflow-gaging stations and wells may differ from general conditions.

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/>