

Current Water Conditions in Massachusetts

October 8, 2009



- September precipitation was below normal
- September streamflows were above normal
- September ground-water levels were above normal to normal
- September reservoir levels were above normal

Precipitation Conditions

September was dry, with state-wide average precipitation estimated at 2.06 inches, which is only about 53 percent of the long-term average for the month. The regions of Massachusetts received between 34 percent (Connecticut Valley Region) and 93 percent (Cape Cod and Islands Regions) of average precipitation during September. September was ranked as the 29th driest in the last 116 years in Massachusetts.

The water year, ending September 30th, was ranked as the 17th wettest on record with 52.3 inches of precipitation, 7 inches more than the 45.3 inches long-term average.

A table of September 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 September total rainfall in Massachusetts and adjacent areas of New England.

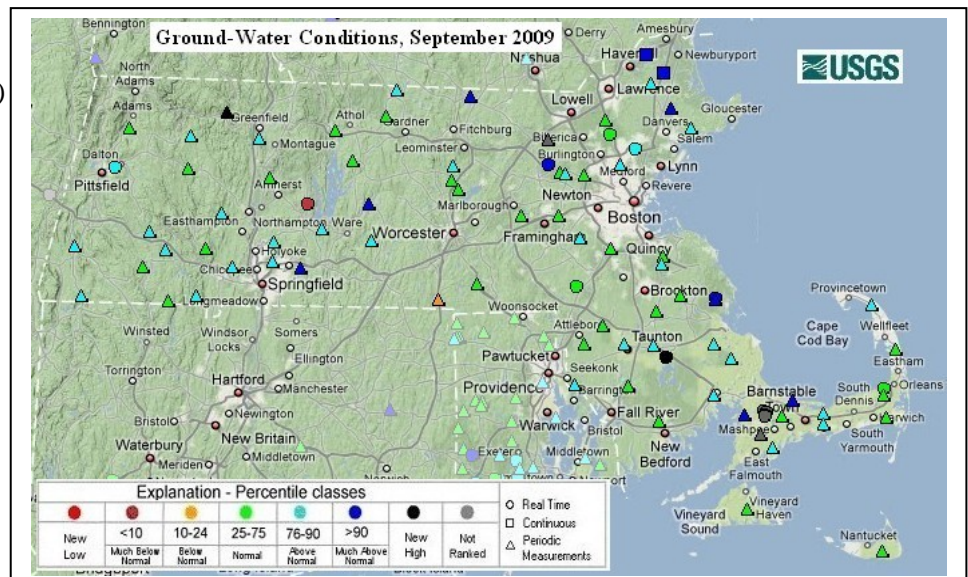
As of October 7th rainfall across the State is a little above normal for the period.

Ground-Water Levels

Ground-water levels reported by the United States Geological Survey (USGS) at the end of September 2009 had a mixed aerial distribution ranging from normal to much above normal. Observation wells in Colrain and Lakeville had new highs for the month. 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 range from normal to above normal and are shown in a table at the end of this report.

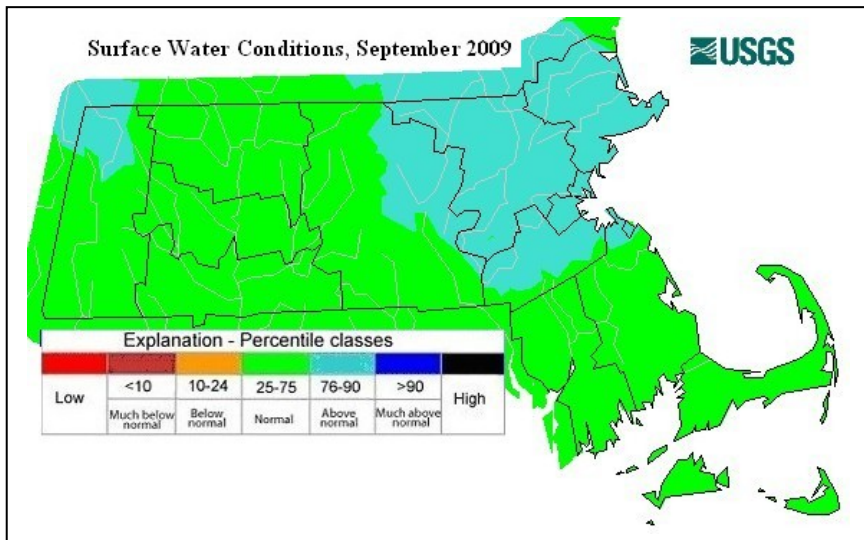
The USGS Groundwater Conditions Statement for the end of September 2009 can be viewed at the web site:

http://ma.water.usgs.gov/water/water_g.htm



Streamflow

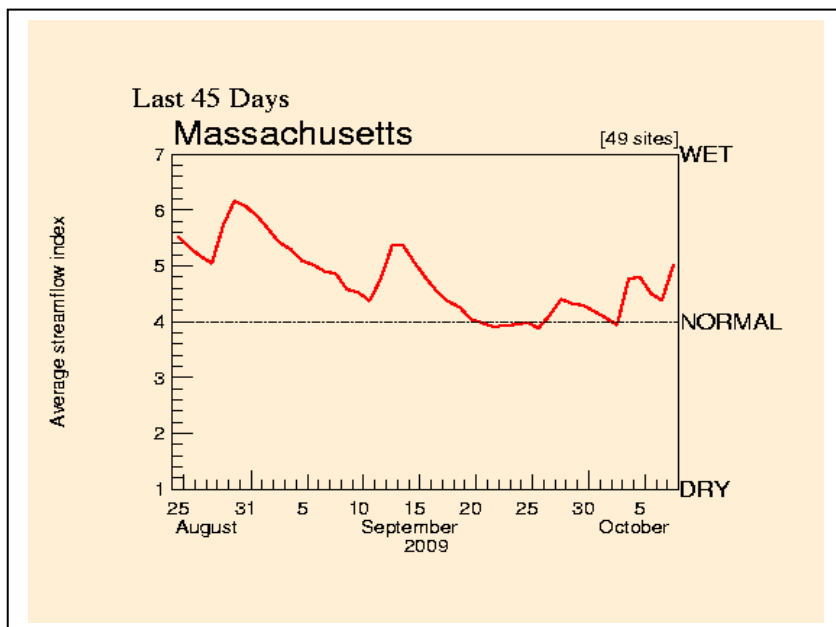
During September 2009 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were mostly normal (green areas on map). The Hoosic River Basin in the northwest corner and several basins in the northeast section of the State had above-average flows (light blue areas on map). The USGS has listed the regions of Massachusetts as having normal to above normal surface-water conditions for September.



The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of August 25 to October 7, 2009. Much-above-normal flows at the beginning of the month slowly declined to near normal during the latter part of the month. Small increases in late September and early October are due to small rainfall events during that period. 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 September and are reported to be generally above-normal for this time of year.

September /October 2009 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	95	Beverly/Salem	82.2
Worcester	92.2	Lynn	67
Cobble Mt./ Springfield	74	Taunton/New Bedford/Assawompsett	105

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) October 6, 2009, 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 September shows moderately dry/very dry (west) to moderately wet/very wet conditions respectively across Massachusetts.

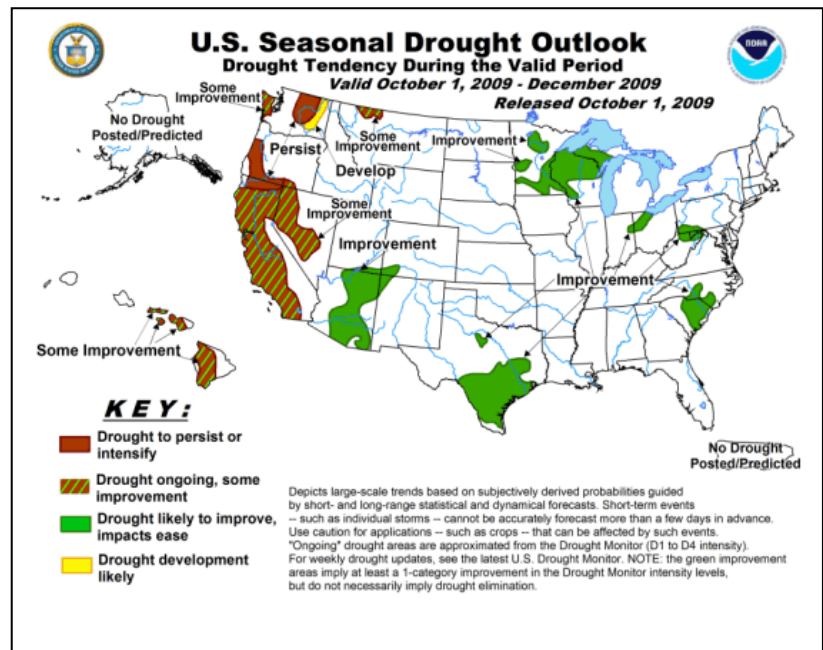
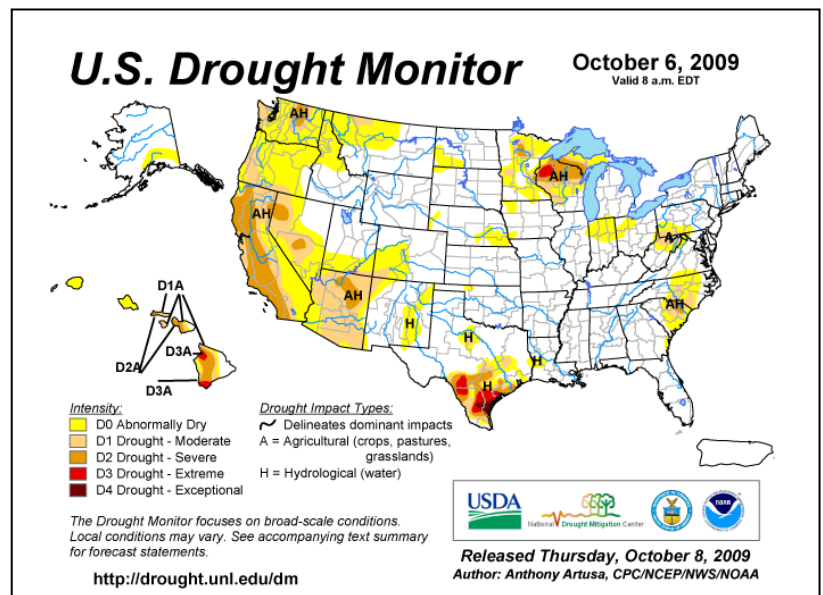
NWS/NOAA's Climate Prediction Center

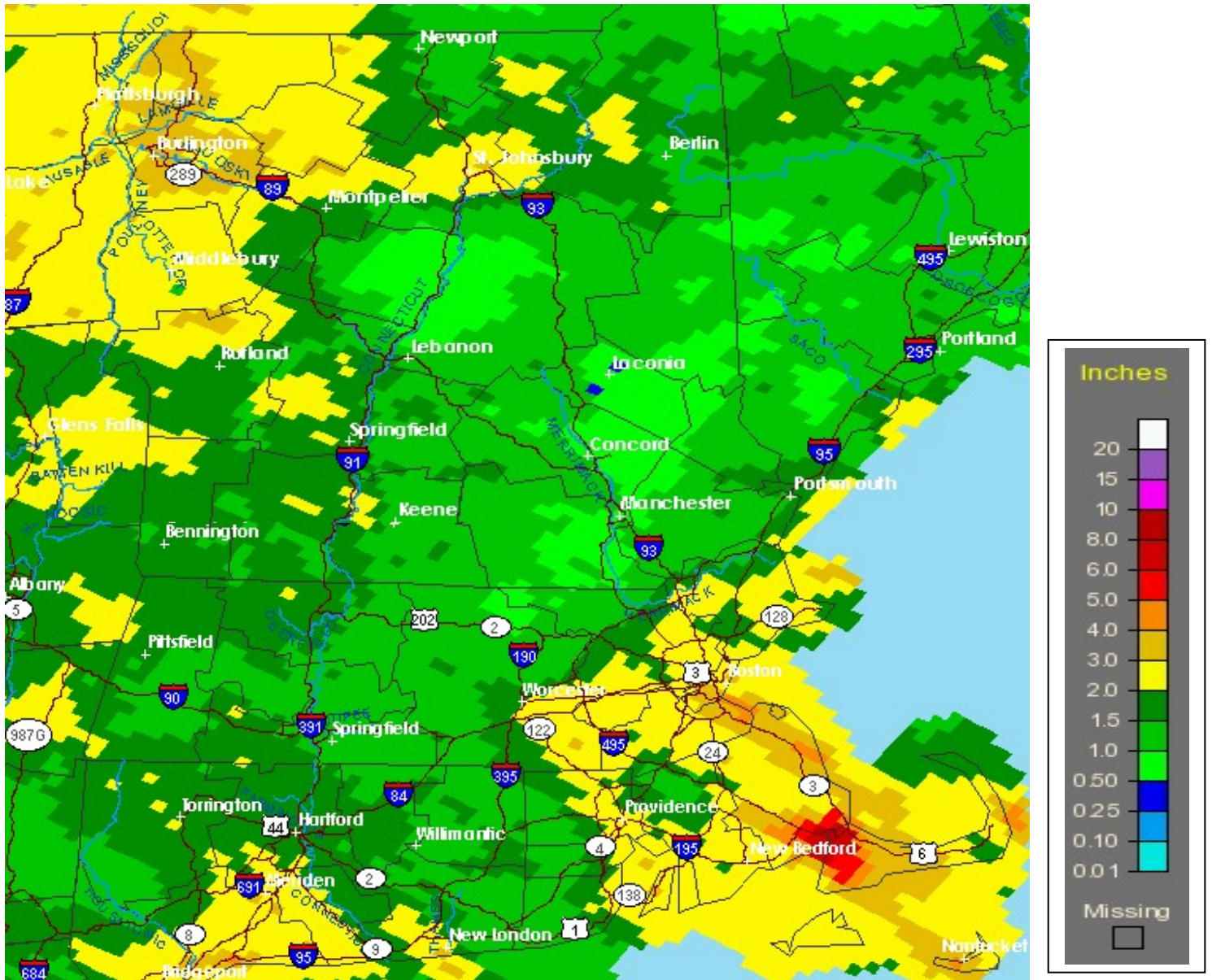
The U.S. Seasonal Drought Outlook dated October 1, 2009, predicts no tendency for drought conditions to develop in Massachusetts through December 2009.

Extended Forecasts

Clear seasonal weather today gives way to showers during Friday as a warm front passes. The weekend forecast is for clear and mild weather. The next weather system approaches late on Monday or Tuesday. The National Weather Service Climate Prediction Center's extended 6 to 10- and 8 to 14-day forecasts predict above normal rainfall and below normal temperatures, the 1- and 3-month forecasts both predicts normal rainfall and temperatures. 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
SEPTEMBER 2009**



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

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