Current Water Conditions in Massachusetts
December 11, 2014

- November precipitation was above and below normal
- November streamflows were normal
- November groundwater levels were normal
- November reservoir levels were generally normal

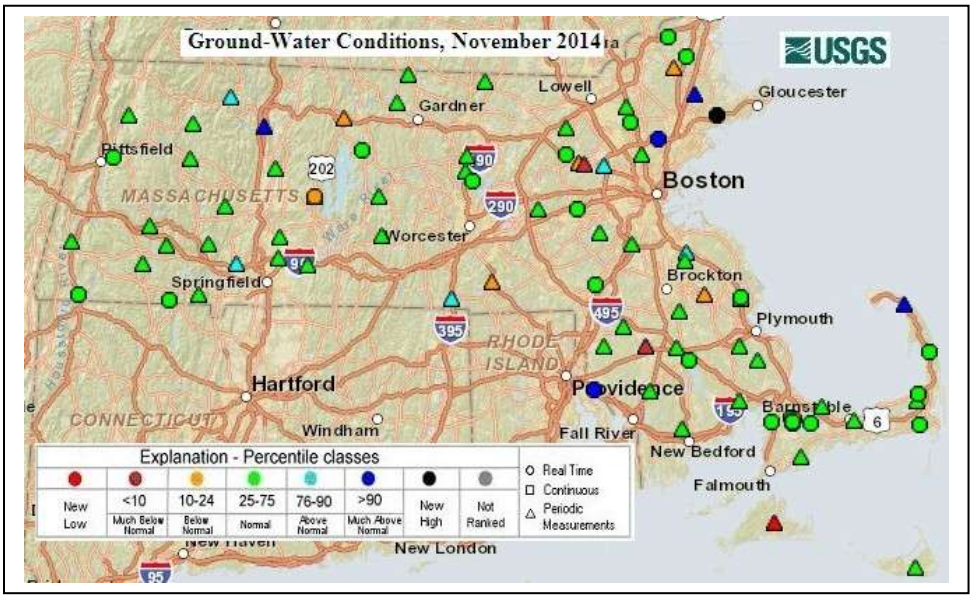
Precipitation Conditions

Estimated November state-wide average precipitation is 4.78 inches, which is 119 percent of the long-term average for the month. Rainfall in the regions of Massachusetts ranged from 197 percent (Cape Cod and islands) to 77 percent (Western) of the long term average. A table of November 2014 estimated precipitation statistics, based on preliminary 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 areal distribution of November rainfall

Soil Moisture percentiles for the eastern two thirds of Massachusetts are above normal at the beginning of December. Soil moisture information is valuable to a wide range of government agencies and private companies concerned with weather and climate, runoff potential and flood control, soil erosion and slope failure, reservoir management, geotechnical engineering, and water quality.

Ground-Water Levels

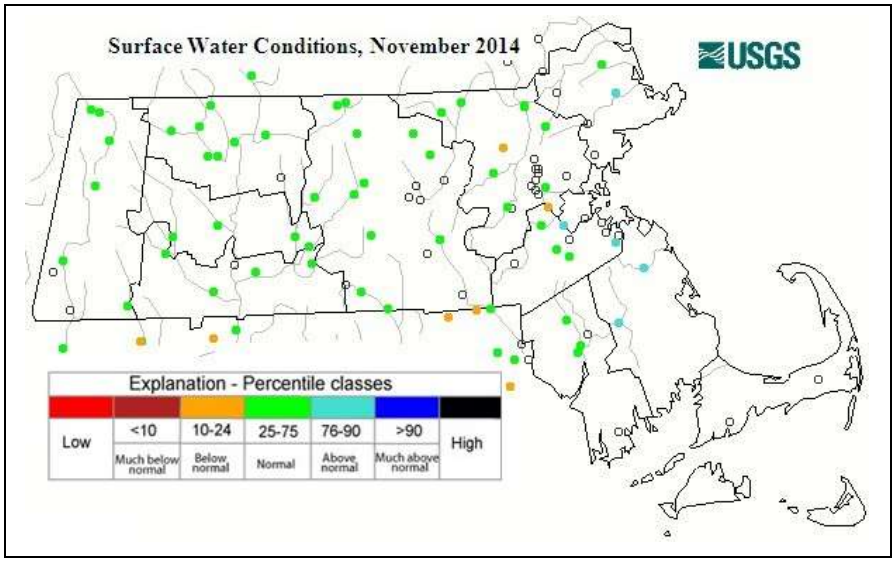
Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of November or beginning of December were generally normal state-wide. A few above and below normal levels were measured state wide. An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. All regions are assessed as having normal groundwater levels. The USGS Groundwater Conditions for the end of November 2014 can be viewed at the web site: http://groundwaterwatch.usgs.gov/StateMapsNet.asp?ncd=crn&sc=25

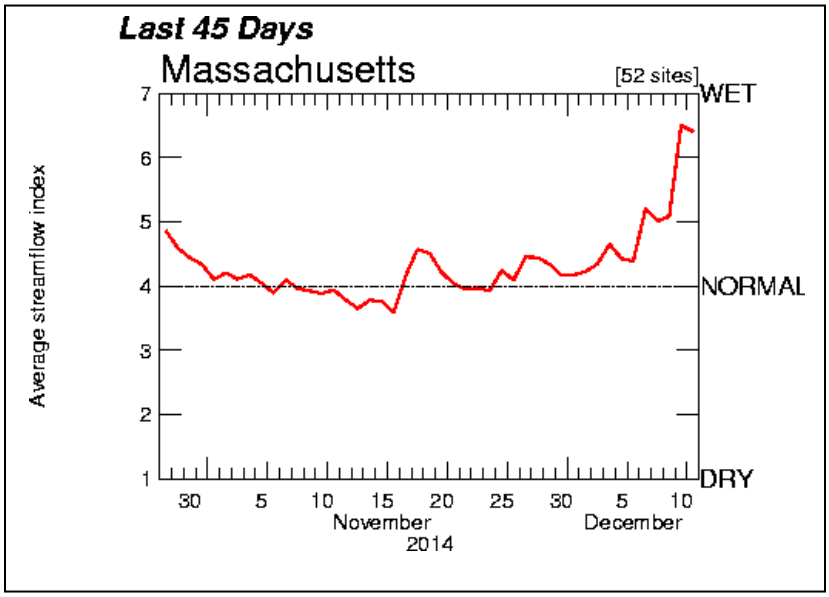


Streamflow

Average November 2014 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally in the normal or above normal range state-wide.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of October 27, to December 10, 2014. Stream flows were close to normal during the entire month. During early December flows have been in the high normal to above normal range. The graph is a composite of 52 real-time gages across the state with a long period of record. This streamflow plot can be found at: http://waterwatch.usgs.gov/index.php?map_type1=pa07d&map_type2=&map_type3=&map_type4=&web_type=pa07d%2Cplot&state=ma&huc=us&xinfo=&map_type=real&group_idx=1&region_cd=ma&group_idx_changed=1&sel_nm=map_type1&sel_va=real





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

Selected surface water reservoir percent-full values for water supply sources provided by water suppliers are listed below. These levels are generally normal for this time of year. The reservoir percent-full values listed are for the end of November or the beginning of December 2014. By December 10th the storage in most reservoirs, especially in eastern areas, has increased significantly.

November /December 2014 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	90.8	Beverly/Salem	79.6
Worcester	82.0	Lynn	63.7
Cobble Mt./ Springfield	93	Taunton/New Bedford/Assawompsett	93

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) December 11, 2014 Drought Monitor Map shown at right indicates normal conditions statewide.

Standardized Precipitation Index (SPI)

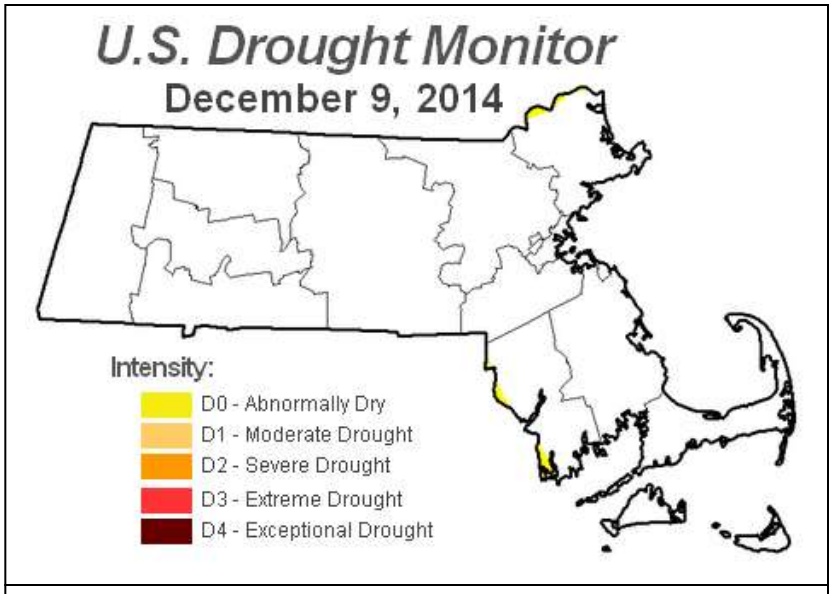
All the Standardized Precipitation Index values for the regions used for the Massachusetts Drought Management Plan are in the normal range.

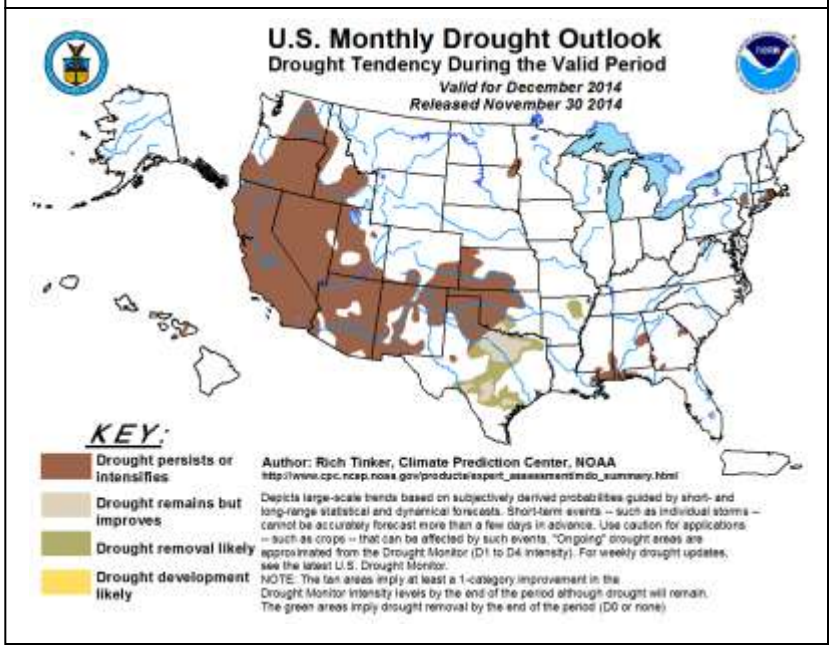
NWS/NOAA's Climate Prediction Center

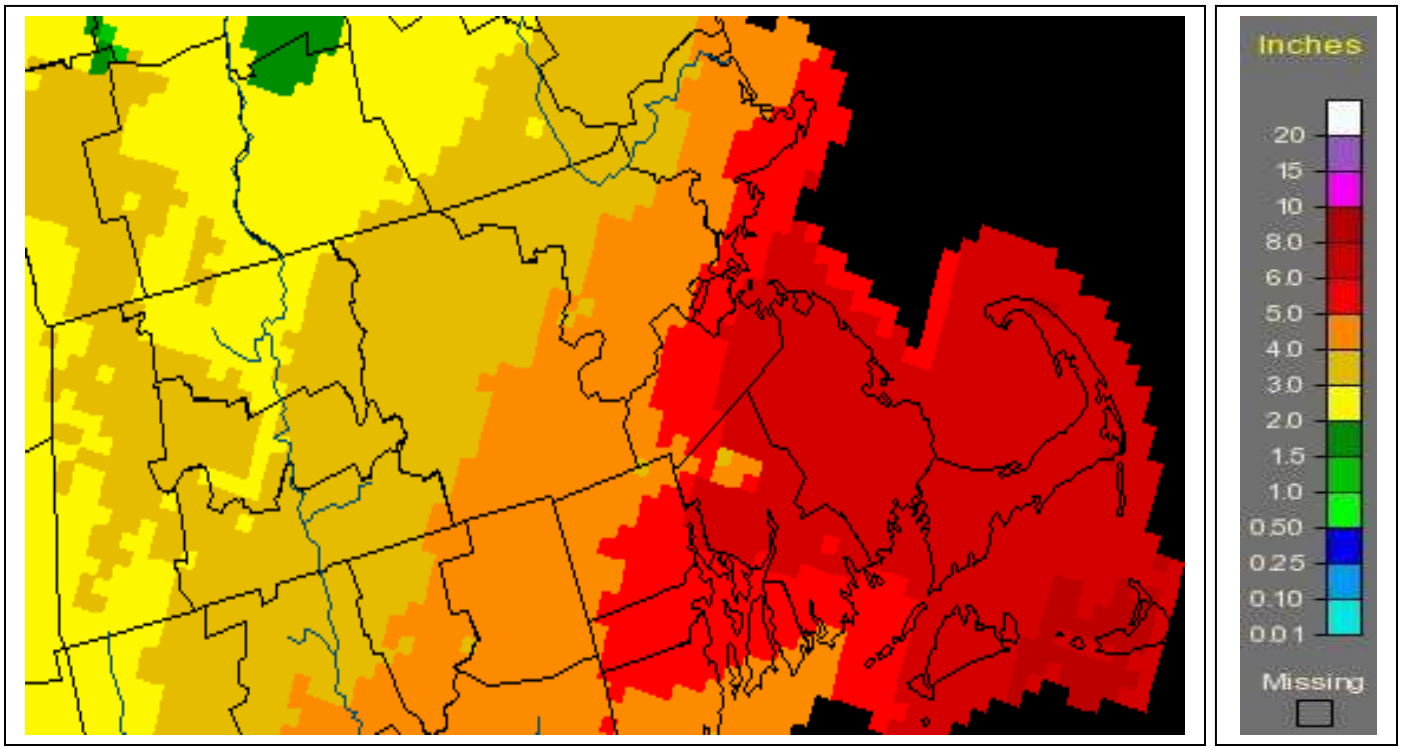
The U.S. Monthly Drought Outlook for December (shown at the right) forecasts that drought conditions will likely be removed by the end of the month. The seasonal drought outlook (not shown) predicts that there will likely be no drought condition by the end of February in Massachusetts.

Extended Forecasts

A slowly weakening storm system wobbling over northern New England will give us periods of light rain and snow through Saturday. Conditions will improve on Sunday and early next week. The National Weather Service Climate Prediction Center's extended 6 to 10- and 8 to 14-day forecasts are both for below normal precipitation and above average temperatures. The 1-month forecast is for normal precipitation and above normal temperatures. The 3-month forecast is for above normal precipitation and normal temperatures. The NWS Climate Prediction Center Information can be found at: http://www.cpc.noaa.gov/index.php







http://water.weather.gov/precip/

TOTAL RAINFALL
NOVEMBER 2014

GENERAL WATER CONDITIONS IN MASSACHUSETTS - NOVEMBER 2014

EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

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

Note: Surface- and ground-water conditions for individual streamflow-gaging stations and wells may differ from general conditions. ND, no data

OVER --- Winter Weather Outlook

Weather Ramblings: ---- NOAA's Winter Weather Outlook
Another warm winter likely for western U.S., South may see colder weather
Repeat of last year's extremely cold, snowy winter east of Rockies unlikely

Below average temperatures are favored in parts of the south-central and southeastern United States, while **above-average temperatures** are most likely in the western U.S., Alaska, Hawaii and **New England**, according to the U.S. Winter Outlook, issued today by NOAA's Climate Prediction Center.

The Precipitation Outlook favors **above-average precipitation** across the southern tier, from the southern half of California, across the Southwest, South-central, and Gulf Coast states, Florida, and **along the eastern seaboard to Maine**. Above-average precipitation also is favored in southern Alaska and the Alaskan panhandle. Below-average precipitation is favored in Hawaii, the Pacific Northwest and the Midwest.

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/eea/agencies/dcr/water-res-protection/water-data-tracking/precipitation-composite-current-conditions.html