

Current Water Conditions in Massachusetts

January 9, 2014



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

Precipitation Conditions

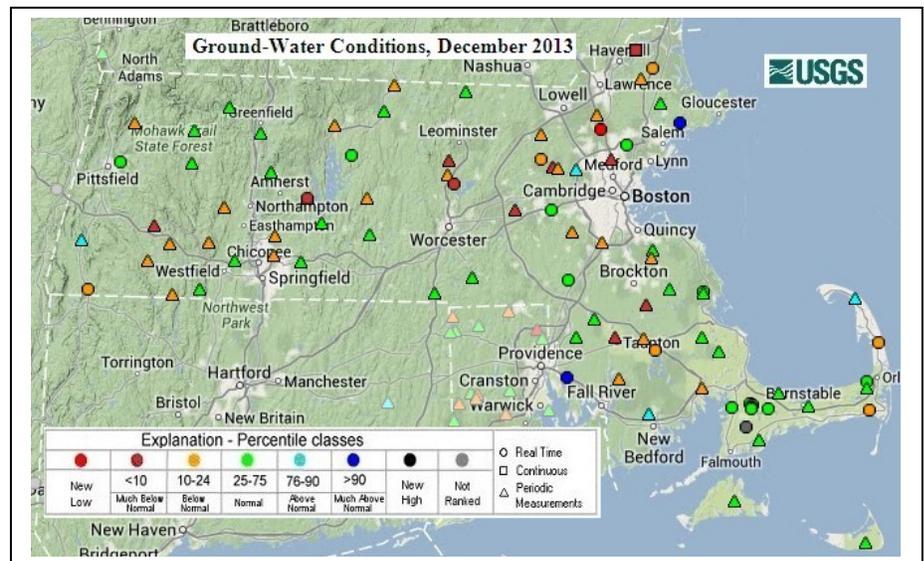
Estimated December state-wide average precipitation is 4.27 inches, which is 109 percent of the long-term average for the month. The regions of Massachusetts received between 89 (Western) and 117 percent (Northeast) of average precipitation during December. Generally precipitation occurred as several moderate rain events at the beginning of the month, several snow events mid-month, and several rain events toward the end of the month.

A table of December 2013 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 distribution of December rainfall in Massachusetts.

Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of December were generally normal in the southeast, Cape Cod, north central and western areas of the state. Areas in the northeast, southeast, and southern Connecticut valley were generally below normal. An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. Ground water levels on Cape Cod and Islands, Southeast, Central, and West Regions are normal. The Northeast and Connecticut Valley Regions are below normal. The USGS Groundwater Conditions for the end of December 2013 can be viewed at the web site:

<http://groundwaterwatch.usgs.gov/StateMapsNet.asp?ncd=crn&sc=25>

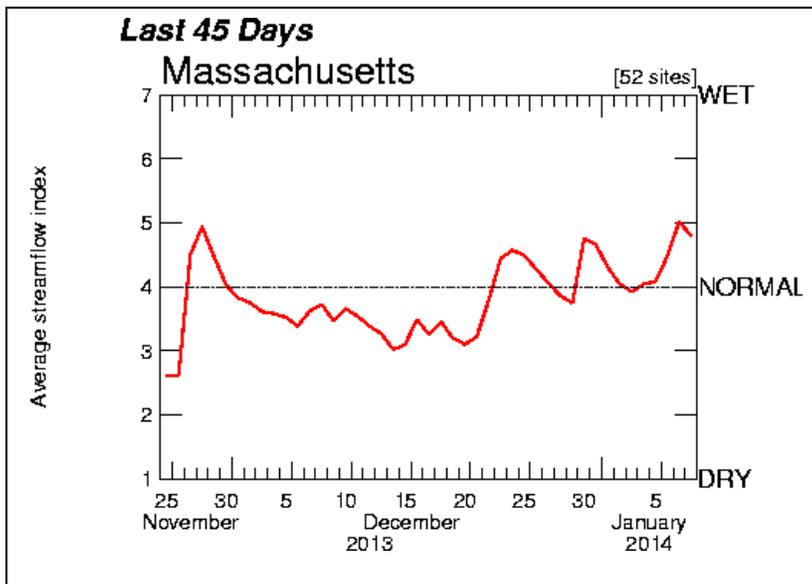
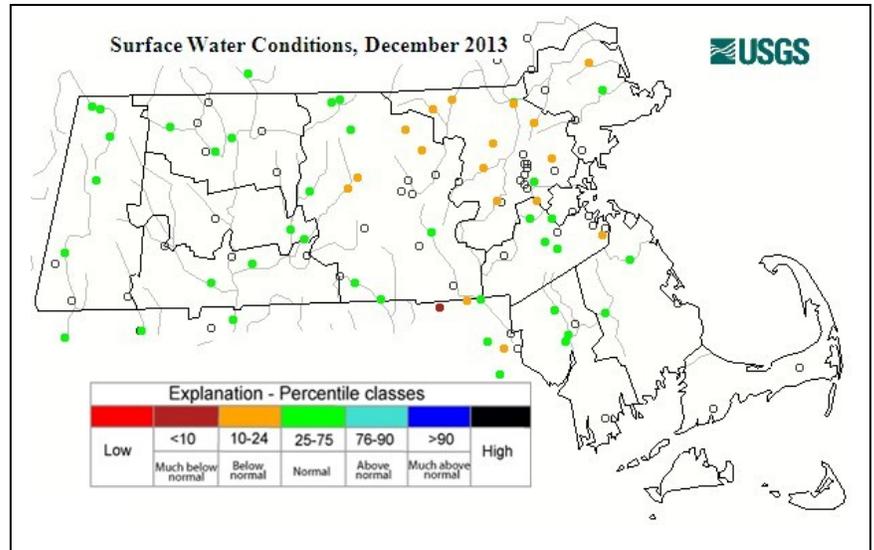


Streamflow

Average December 2013 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program were generally below normal in the northeast and extending into the east central area of the state.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of November 24, 2013 to January 7, 2014. Flows were generally in the low normal to below normal range until December 21st when a period of milder temperatures and several rain events caused flows to rise into the high 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®ion_cd=ma&group_idx_changed=1&sel_m=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 or slightly below normal for this time of year. The reservoir percent-full values listed are for the end of December 2013 or the beginning of January 2014.

December 2013/January 2014 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	88.3	Beverly/Salem	72
Worcester	67	Lynn	56.3
Cobble Mt./ Springfield	77.3	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) January 7, 2014 Drought Monitor Map shown at right indicates moderate drought conditions in the eastern half of Massachusetts and abnormally dry conditions in the central, and west areas of the state.

Standardized Precipitation Index (SPI)

The six-month Standardized Precipitation Index value used for the Massachusetts Drought Management Plan is in the advisory range for Cape Cod and the Islands. All the other SPI values are in the normal range.

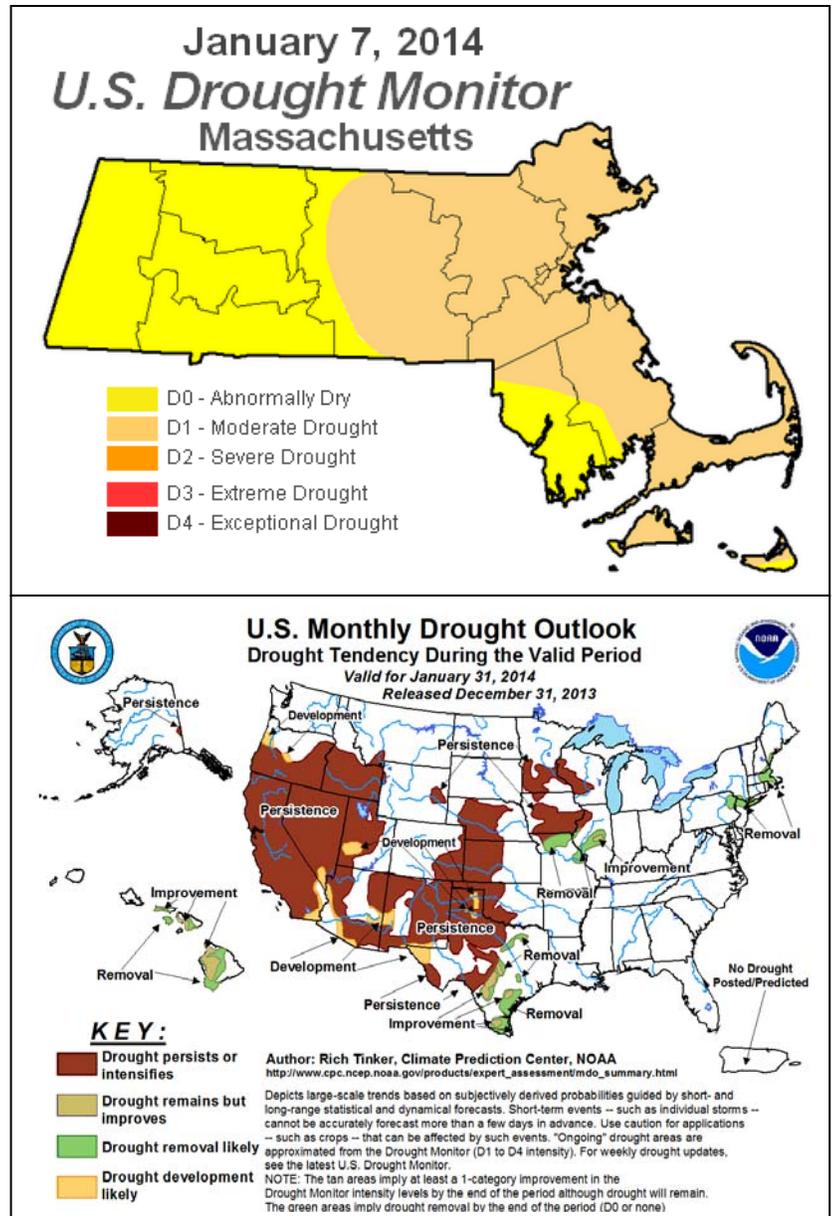
NWS/NOAA's Climate Prediction Center

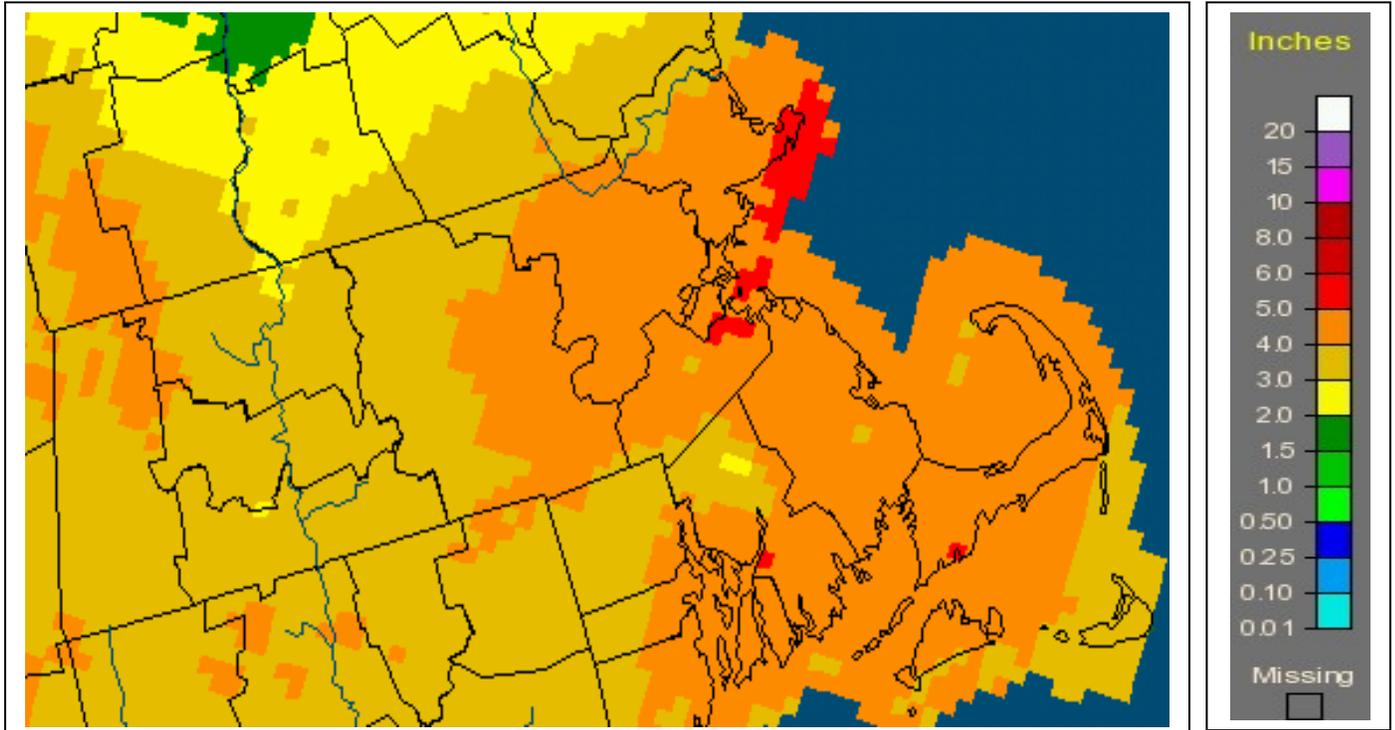
The U.S. Monthly Drought Outlook for January (shown at the right) forecasts that drought conditions will likely be removed during the month. The seasonal drought outlook (not shown) predicts that drought conditions in the state will likely be removed through March 2014.

Extended Forecasts

Friday will be milder with light snow showers. A period of heavy rain, with the probability of an inch or more in some areas, is forecast for late Saturday and early Sunday. Mild and dry weather is forecast for early next week. The National Weather Service Climate Prediction Center's extended 6 to 10-day forecast is for above normal rainfall and temperatures. The 8 to 14-day forecast is for above normal rainfall and normal temperatures. The 1-and 3-month forecasts are for normal rainfall and 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
DECEMBER 2013**



GENERAL WATER CONDITIONS IN MASSACHUSETTS - DECEMBER 2013
EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

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

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>