

Current Water Conditions in Massachusetts

November 14, 2013



- October precipitation was below normal
- October streamflows were normal and below normal
- October groundwater levels were normal and below normal
- October reservoir levels were normal

Precipitation Conditions

Estimated October state-wide average precipitation is 1.40 inches, which is 36 percent of the long-term average for the month. The regions of Massachusetts received between 22 (Cape Cod and Islands) and 53 percent (Central) of average precipitation during October. What little rainfall we got generally occurred from the 4th to the 8th and during a few periods of very light showers later in October. Rainfall in November continues below normal, ranging from 5 to 75 percent of normal for this period of the month.

A table of October 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 October rainfall in Massachusetts.

Fire Danger

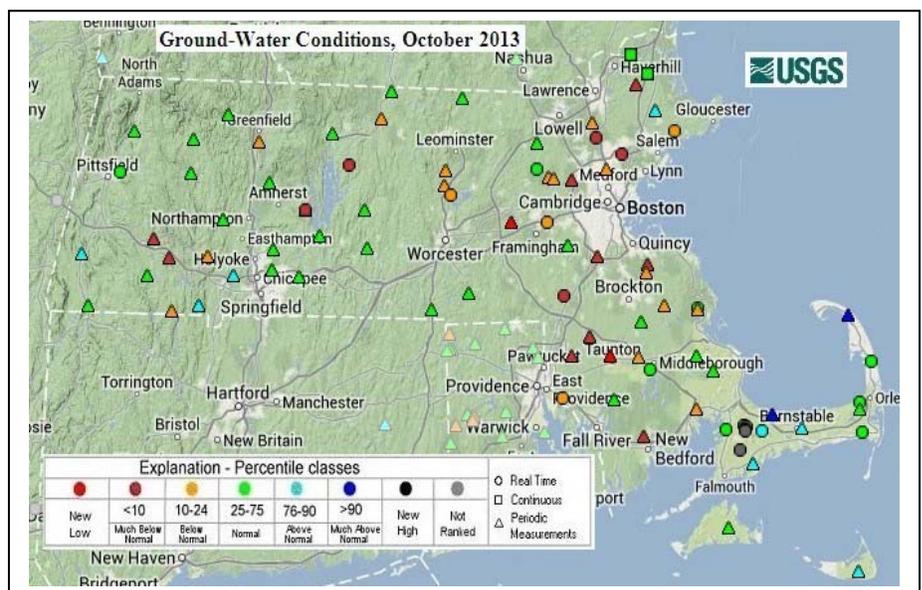
Low rainfall coupled with fall vegetation die-down and leaf fall has resulted in numerous small to medium brush and woodland fires across the state.

Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of October were generally above normal on Cape Cod and the Islands, below normal in the eastern areas and generally in the normal range in the remainder of the state.

An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. Cape Cod and Islands region is above normal, southeast and northeast regions are below normal and remaining regions are normal. The USGS Groundwater Conditions for the end of October 2013 can be viewed at the web site:

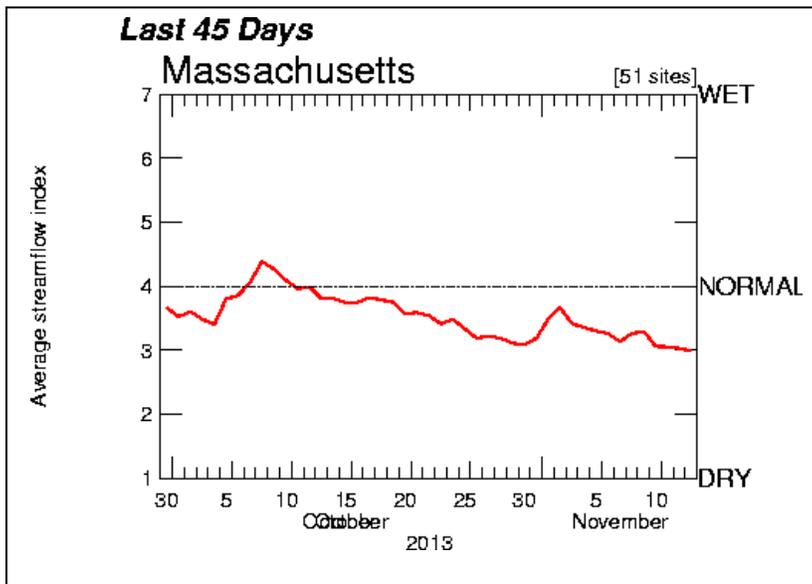
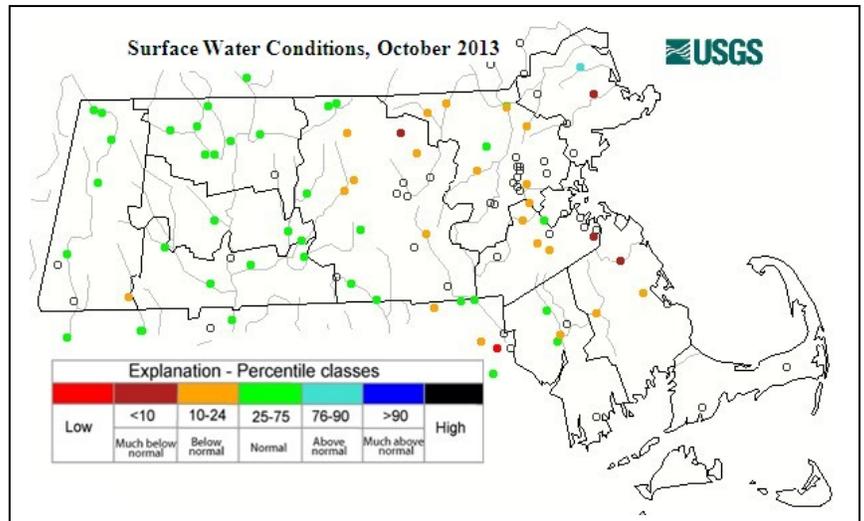
<http://groundwaterwatch.usgs.gov/StateMapsNet.asp?ncd=crn&sc=25>



Streamflow

Average October 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 eastern half of the state and were generally normal in the western half of the state.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of September 29 to November 12, 2013. Generally downward trending flows, mostly in the low normal range, reached the below normal level on November 12. The graph is a composite of 51 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 for this time of year. A few additional reservoirs were below normal at the end of October. The reservoir percent-full values listed are for the end of October or the beginning of November 2013.

October/November 2013 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	89.2	Beverly/Salem	75
Worcester	67	Lynn	56.7
Cobble Mt./ Springfield	77.1	Taunton/New Bedford/Assawompsett	85.6

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) November 12, 2013 Drought Monitor Map shown at right indicates moderate drought conditions in the eastern half of Massachusetts and abnormally dry conditions in the northeast, central, and southwest areas of the state. Only the northwest area remains normal.

Standardized Precipitation Index (SPI)

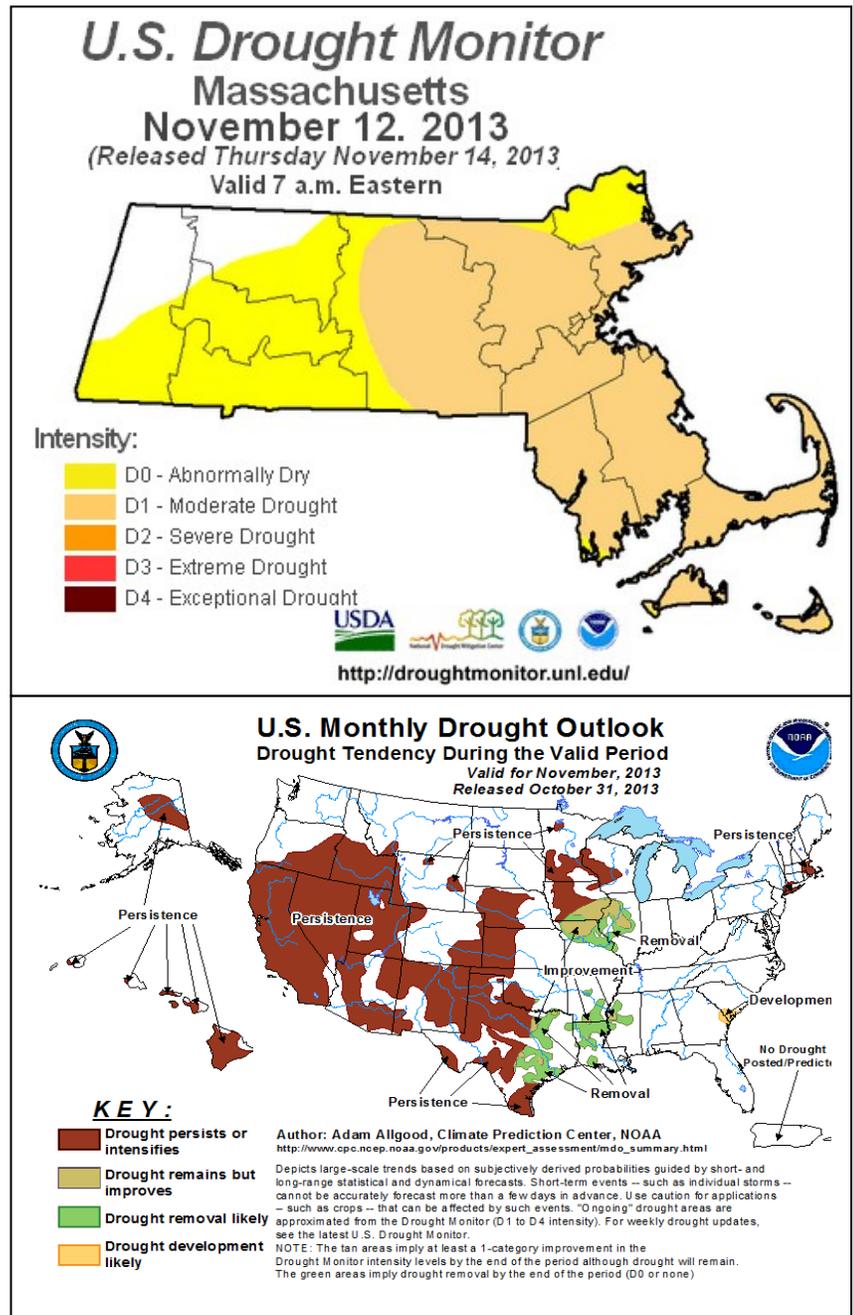
Massachusetts Standardized Precipitation Index values used for the Massachusetts Drought Management Plan are unavailable at present.

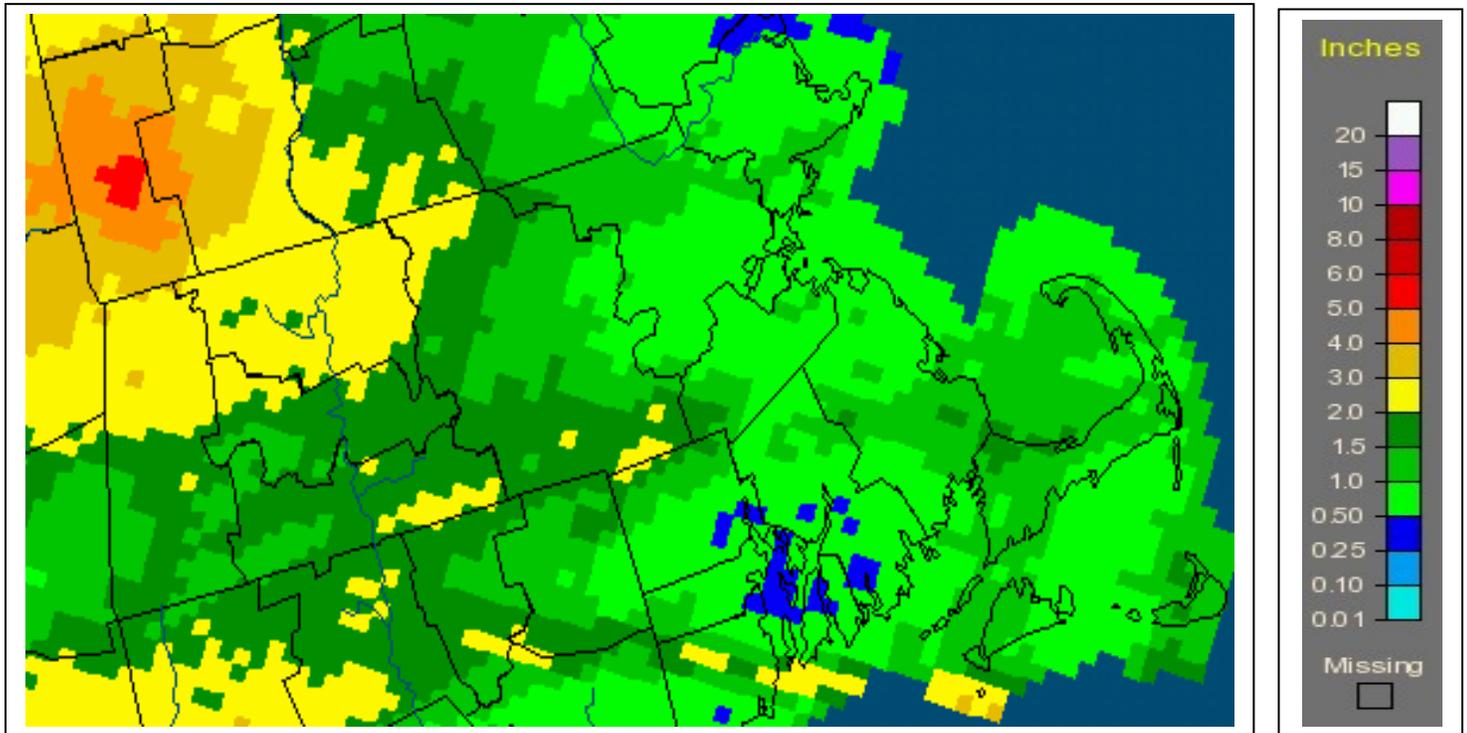
NWS/NOAA's Climate Prediction Center

The U.S. Monthly Drought Outlook for November (shown at the right) forecasts that drought conditions will persist or intensify through the month. The seasonal drought outlook (not shown) predicts normal conditions in the region through January 2013.

Extended Forecasts

Generally clear, dry, and warming weather will be present today through late Sunday. Temperatures may reach the high 50's Saturday and Sunday. Much needed rain should occur early next week resulting from a passing cold front. Colder weather returns later next week. The National Weather Service Climate Prediction Center's extended 6 to 10-day forecast is for above normal rainfall and temperatures. The 4 to 14-day forecast is for below normal rainfall and normal temperatures. The 1-month forecast is for normal rainfall and temperatures. The 3-month forecast is for normal rainfall and above 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
OCTOBER 2013**



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

Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	ND	Above Normal
Southeast	Below Normal	Below Normal
Northeast	Below Normal	Below 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

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>