

Current Water Conditions in Massachusetts

March 13, 2014



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

Precipitation Conditions

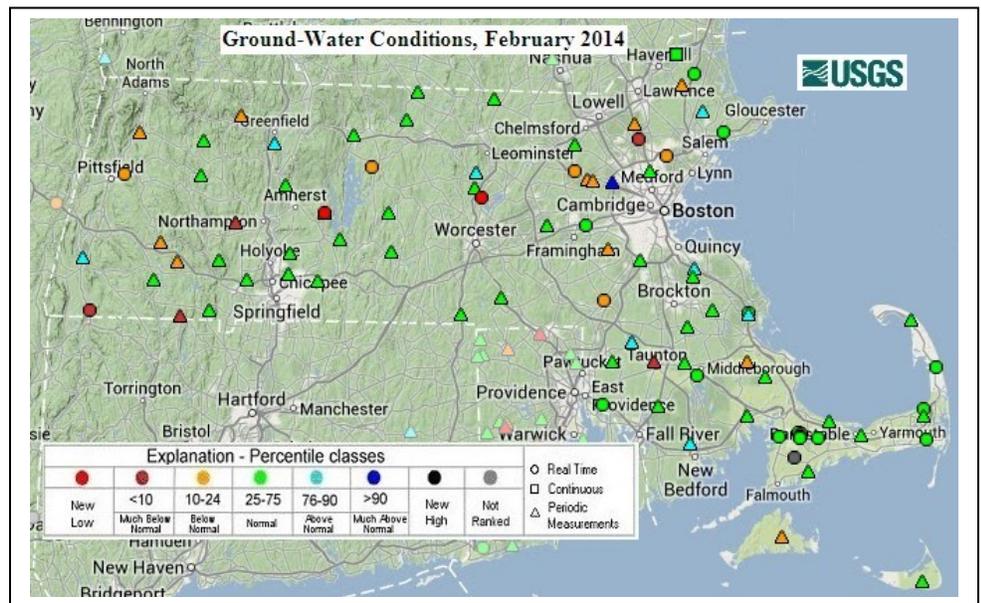
Estimated February state-wide average precipitation is 4.44 inches, which is 137 percent of the long-term average for the month. The regions of Massachusetts received between 111 (Connecticut River) and 181 percent (Cape Cod and islands) of average precipitation during February. Precipitation was mainly rain in the southeast and on the Cape and the Islands, elsewhere it was mainly snow. Generally the state is snow covered north and west of the Boston metro area. In most of this area the snow pack contains 2 to 4 inches of water. A small area of the high Berkshire Hills west of the Connecticut River contains 4 to 6 inches of water.

A table of February 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 February rainfall in Massachusetts and a nice summary of the 2013 climatologic year is shown in an illustration from the Blue Hills Observatory.

Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of February were below normal in the western area and generally normal throughout the rest of the state. Scattered wells throughout the state have below normal water levels. 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 in the western region are below normal, the rest of the drought regions are normal. The USGS Groundwater Conditions for the end of February 2014 can be viewed at the web site:

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

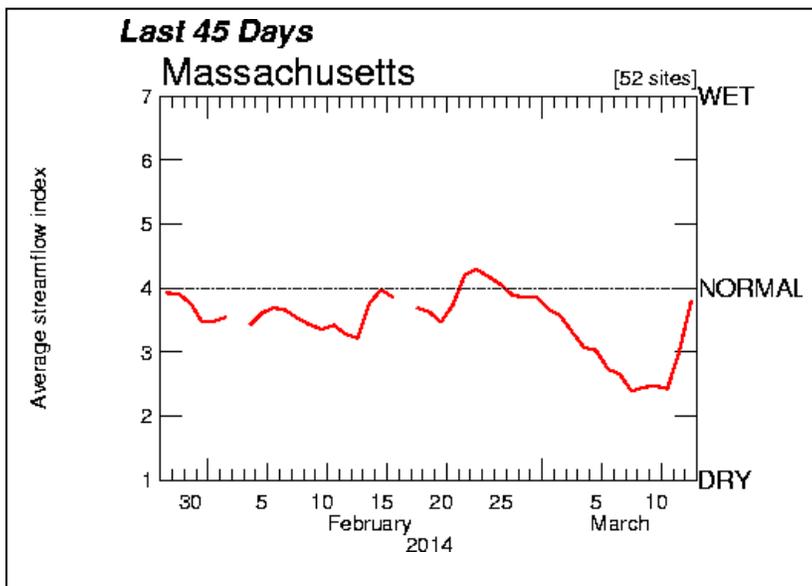
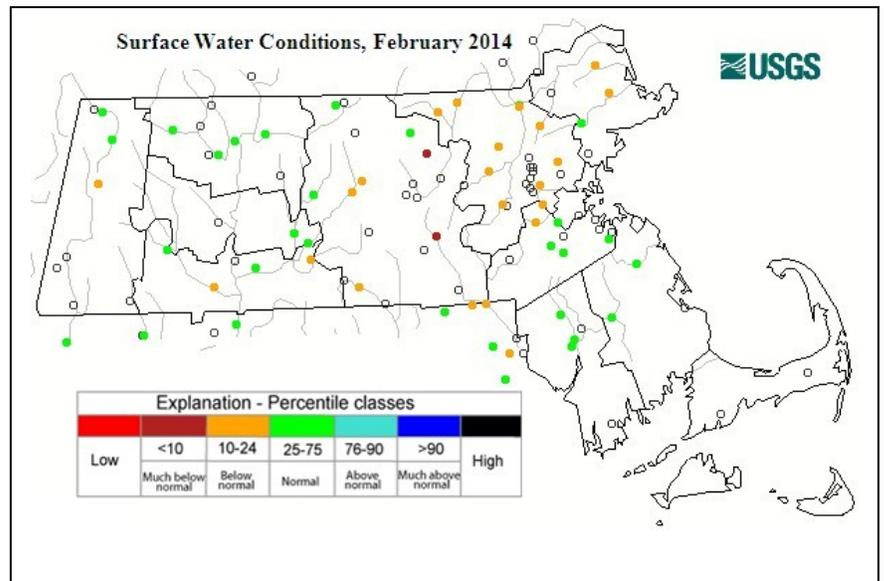


Streamflow

Average February 2014 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 northeastern and central areas of the state and normal in the remainder of the state.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of January 25, 2013 to March 11, 2014. Flows were generally in the low normal range most of February but have dropped into the below normal range during the first part of March but rebounded during the last several days due to snow melt and precipitation. Peaks on the hydrograph correspond to periods of rainfall and snow melt which in general only occurred in the southeast area of the state. 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_n_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 February or the beginning of March 2014.

February /March 2014 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	90.7	Beverly/Salem	97.3
Worcester	78	Lynn	72.6
Cobble Mt./ Springfield	69.8	Taunton/New Bedford/Assawompsett	99

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) March 11, 2014 Drought Monitor Map shown at right indicates a small area of abnormally dry conditions in east central Massachusetts.

Standardized Precipitation Index (SPI)

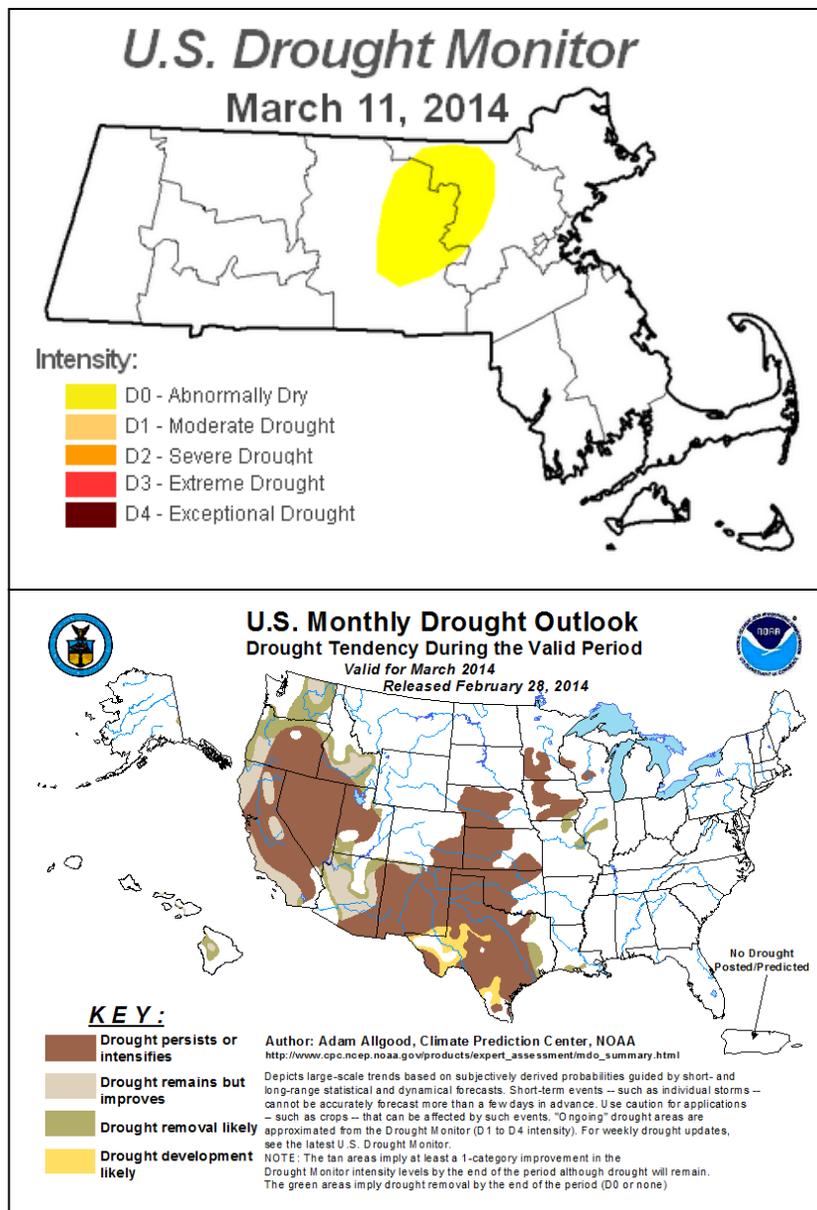
All the Standardized Precipitation Index values for the regions used for the Massachusetts Drought Management Plan are in the normal range.

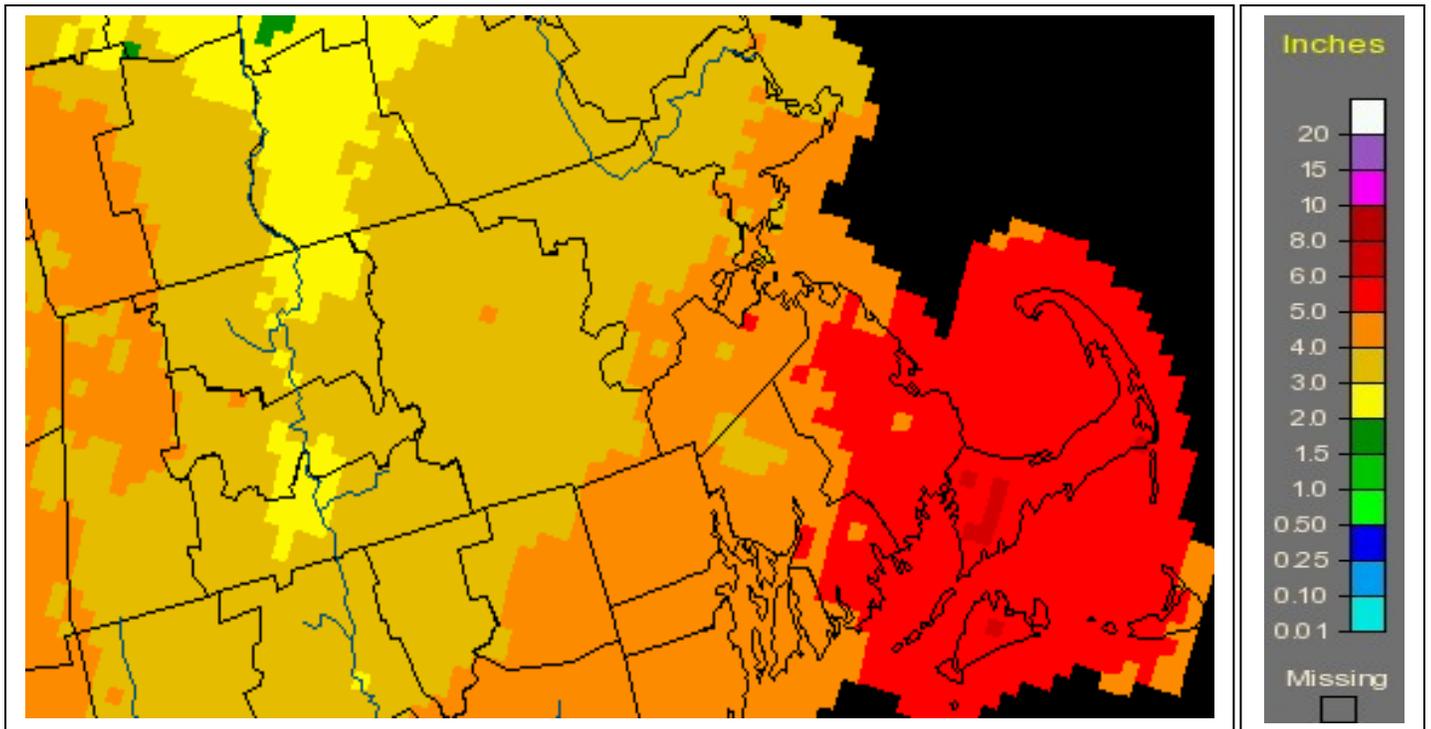
NWS/NOAA's Climate Prediction Center

The U.S. Monthly Drought Outlook for March (shown at the right) forecasts normal conditions at the end of the month. The seasonal drought outlook (not shown) predicts that there will be no drought condition through the end of May.

Extended Forecasts

Flurries ending this afternoon will usher in frigid weather. There may be a record low temperature tonight. Friday and Saturday will moderate with temperatures in the high 30's. Sunday and early next week will be cold again. Periods of showers and flurries are possible throughout the period. 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 and 1-month forecasts are for normal rainfall and above normal temperatures. The 3-month forecast is 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
FEBRUARY 2014**



GENERAL WATER CONDITIONS IN MASSACHUSETTS - FEBRUARY 2014
EOEEA and MEMA DROUGHT MANAGEMENT PLAN REGIONS

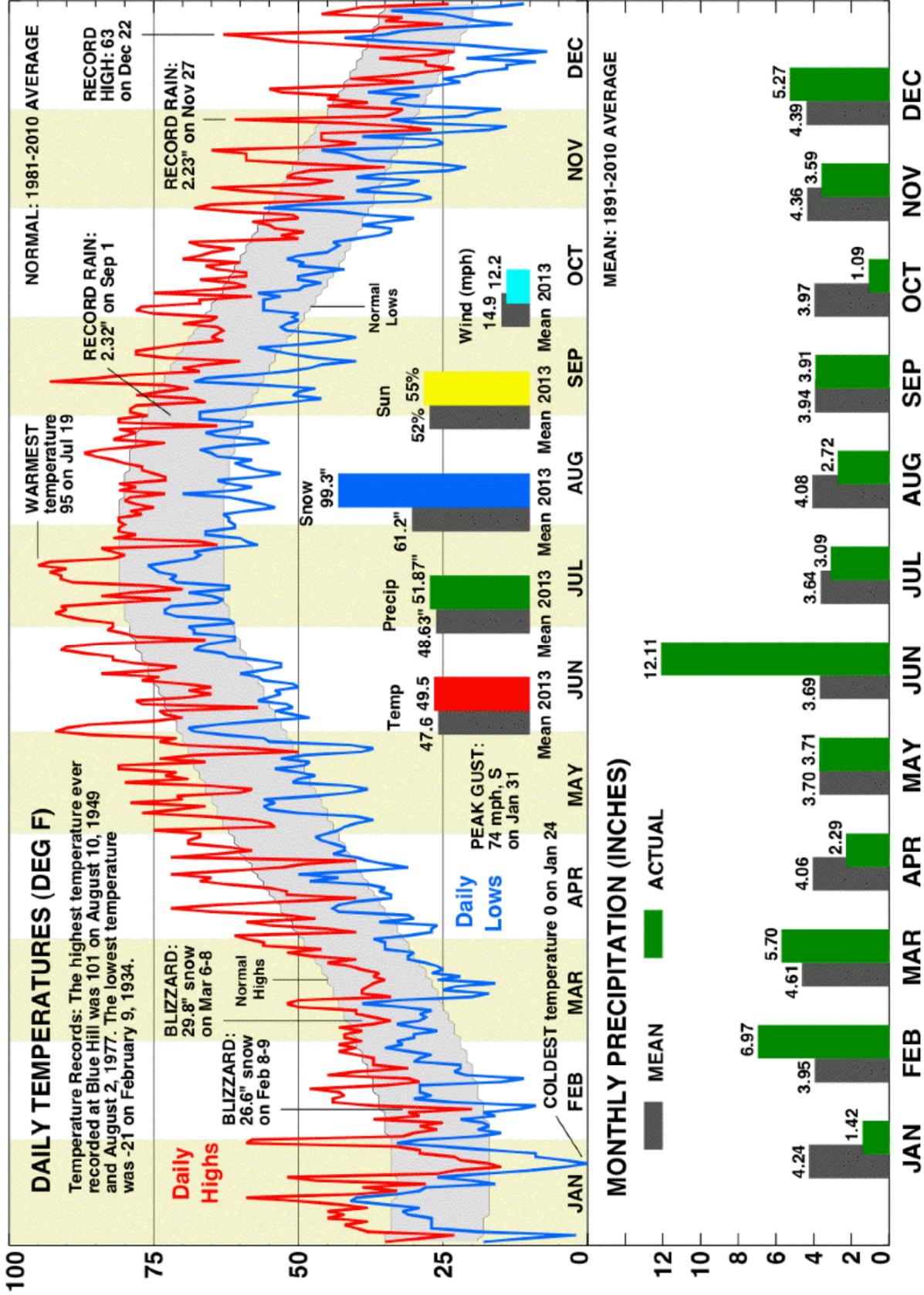
Massachusetts Regions	Surface-Water Conditions	Ground-Water Conditions
Cape and Islands	ND	Normal
Southeast	Normal	Normal
Northeast	Below Normal	Normal
Central	Below Normal	Normal
Connecticut River	Normal	Normal
Western	Normal	Below Normal

Note: Surface- and ground-water conditions for individual streamflow-gaging stations and wells June 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>

BLUE HILL OBSERVATORY 2013 YEAR IN REVIEW



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