

Current Water Conditions in Massachusetts

April 11, 2013



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

Precipitation Conditions

Estimated March state-wide average precipitation is 3.19 inches, which is 80 percent of the long-term average for the month. The regions of Massachusetts received between 33 (Western) and 119 percent (Cape Cod and Islands) of average precipitation during March.

A coastal storm in early March increased the coastal erosion caused by a February storm and resulted in the loss of several homes on Plum Island, a barrier island in northeastern MA.

A table of March 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. The statistics indicate that the west region is at watch level for the Massachusetts Drought Plan precipitation index. Five other indices are considered in drought determinations in accordance with the drought plan. A map at the back of this report shows the distribution of March rainfall in Massachusetts.

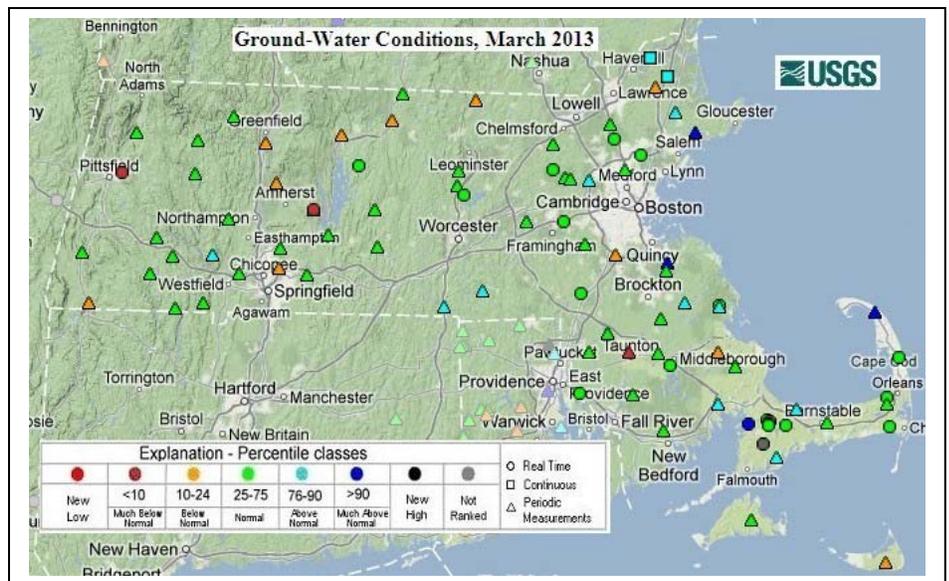
Fire Danger

Fire danger conditions have been elevated during early April as green-up and leaf-out has not occurred. This condition has been especially prevalent on low humidity, warm, and windy days.

Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of March are generally below normal in far west and normal in the rest of the state. Levels remain below normal on the Island of Nantucket. An assessment of ground-water conditions in the Massachusetts drought regions is shown in a table at the end of this report. The western region is listed as below normal and the rest are listed as having normal conditions. The USGS Groundwater Conditions for the end of March 2013 can be viewed at the web site:

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

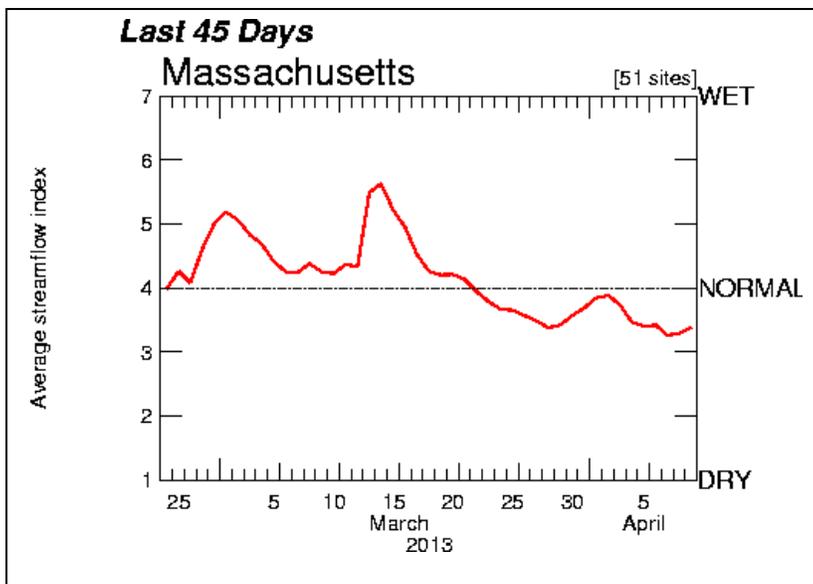
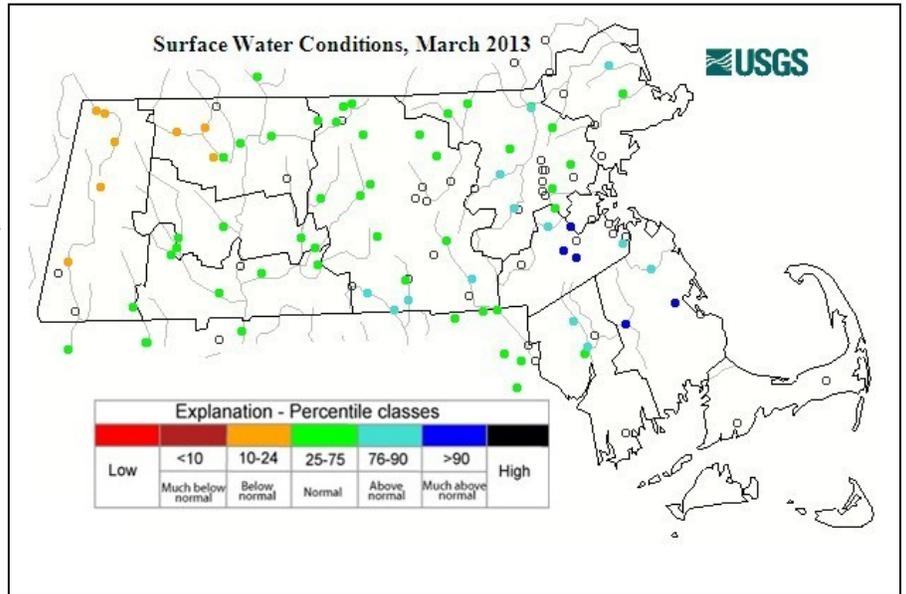


Streamflow

Average March 2013 streamflows that are monitored by the Commonwealth of Massachusetts and United States Geological Survey (USGS) cooperative stream gaging program ranged from above normal in the southeastern to below normal in the western areas of the state. As shown in a table at the end of this report MA DCR has listed the southeast Drought Region as above normal, the western region as below normal and the remaining regions as normal.

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of February 25, to April 8, 2013. Flows generally were in the high normal range with two peaks above normal during the first half of the month and in the low normal range during the second half of the month and beginning of April. 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_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 March or the beginning of April 2013.

March/April 2013 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	90.2	Beverly/Salem	91.1
Worcester	101	Lynn	83.3
Cobble Mt./ Springfield	86.1	Taunton/New Bedford/Assawompsett	103.2

Note: NA Indicates data not available for this report

Drought Indices/Forecasts

US Drought Monitor

The National Drought Mitigation Center's (NDMC's) April 12, 2013 Drought Monitor Map shown at right shows some adjacent abnormally dry areas in NY, NH, and VT but no areas of concern yet in Massachusetts.

Standardized Precipitation Index (SPI)

The Massachusetts Standardized Precipitation Index values for 1-, 3-, 6-, and 12-months indicate that the Central Region is in the Massachusetts drought plan Advisory Level and that the Western Region is in the plan's Watch Level.

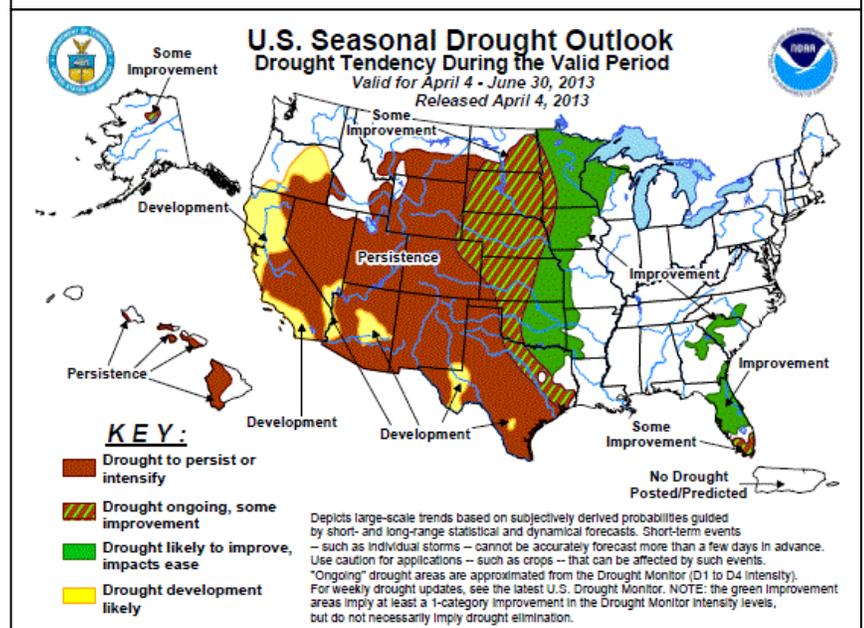
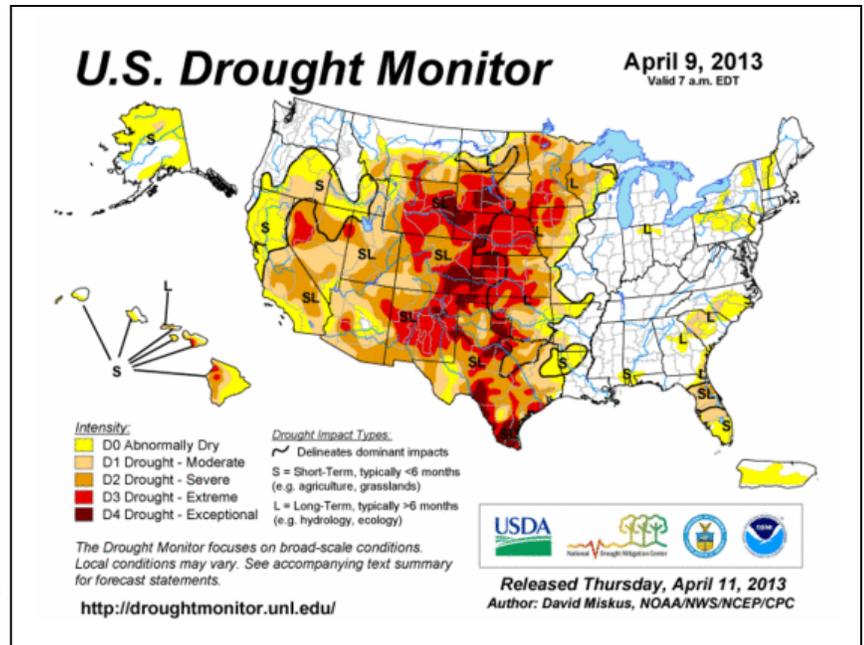
NWS/NOAA's Climate Prediction Center

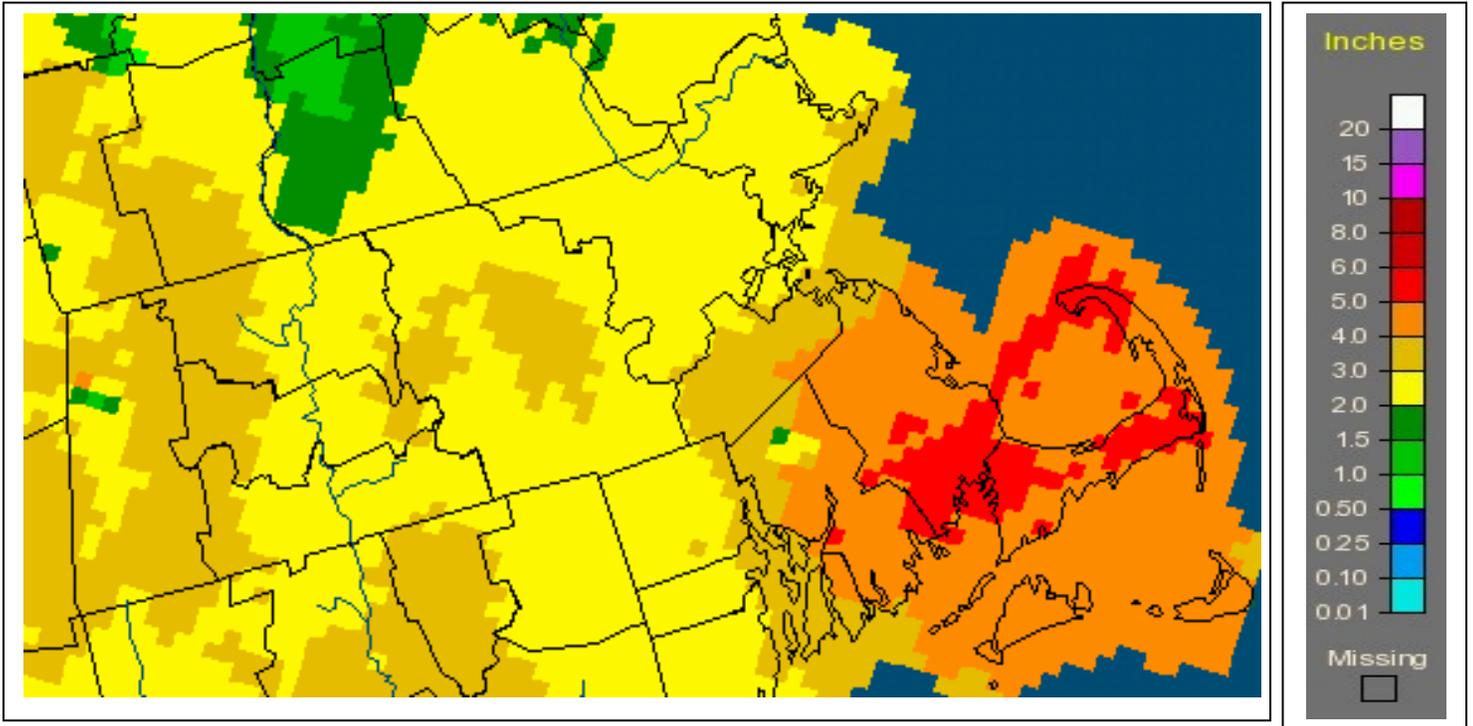
The U.S. Seasonal Drought Outlook dated April 4, 2013 shows no drought conditions in New England and predicts normal conditions in the region through June 2013.

Extended Forecasts

Low pressure over the great lakes and a secondary low along the mid Atlantic coast should bring about 0.75-1 inches of rain and cooler weather tonight through Friday. Dry and seasonable weather will return for the weekend into the beginning of next week. There is a slight chance of precipitation during mid-week. The National Weather Service Climate Prediction Center's extended 6- to 10-day forecast is for above normal temperatures and precipitation. The 8-to 14-day forecast is for normal temperatures and above normal precipitation. Both the 1- and 3-month forecast are for normal temperatures and precipitation. The NWS Climate Prediction Center Information can be found at:

<http://www.cpc.noaa.gov/index.php>





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

**TOTAL RAINFALL
MARCH 2013**



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

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