

# Current Water Conditions in Massachusetts

## June 19, 2014



- May precipitation was below normal in west and east
- May streamflows were normal and above normal
- May groundwater levels were mostly normal
- May reservoir levels were generally normal

### Precipitation Conditions

Estimated May state-wide average precipitation is 3.46 inches, which is 91 percent of the long-term average for the month. The regions of Massachusetts received between 49 (Cape Cod and Islands) and 138 percent (Connecticut River) of average precipitation during May. The west, northeast, southeast, and Cape Cod and the Islands regions had below normal precipitation in May. The MA Drought Management Plan precipitation index is at the advisory level for the Cape Cod and Islands Region. The Connecticut River region was above normal. May 2014 was the 60<sup>th</sup> driest May in the last 119 years in Massachusetts according to the National Climate Data Center.

A table of May 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 distribution of May rainfall.

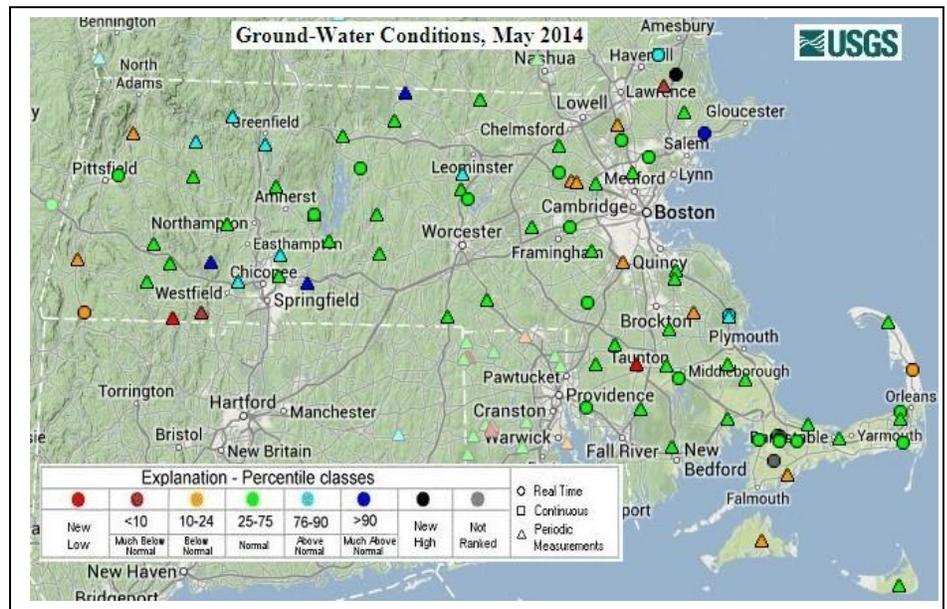
Soil moisture levels are reported as normal for this time of year.

June precipitation to date has only been about 50 percent of normal in the central, northeast, and southeast areas of the state and near normal in the remaining areas.

### Ground-Water Levels

Based on preliminary data, ground-water levels reported by the U.S. Geological Survey at the end of May were generally below normal in the western area and normal 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. The western drought region is shown as below normal and the remaining regions as normal. The USGS Groundwater Conditions for the end of May 2014 can be viewed at the web site:

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



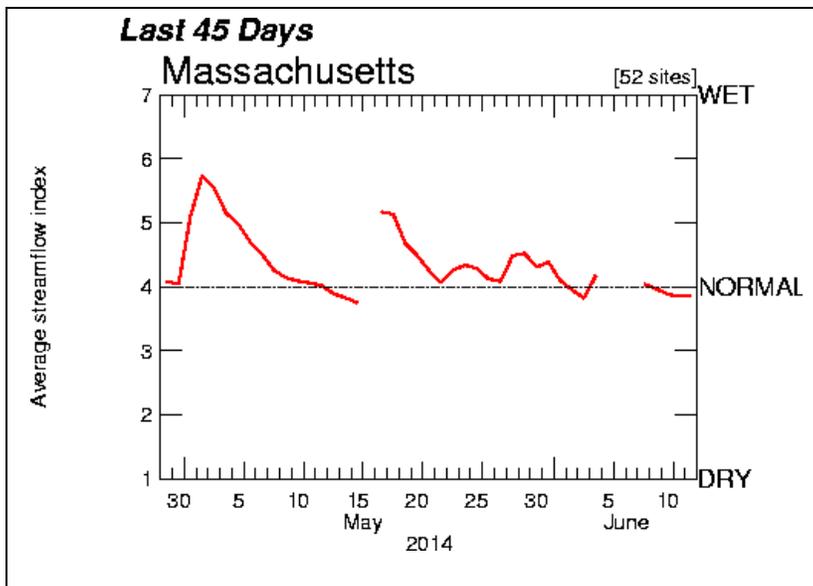
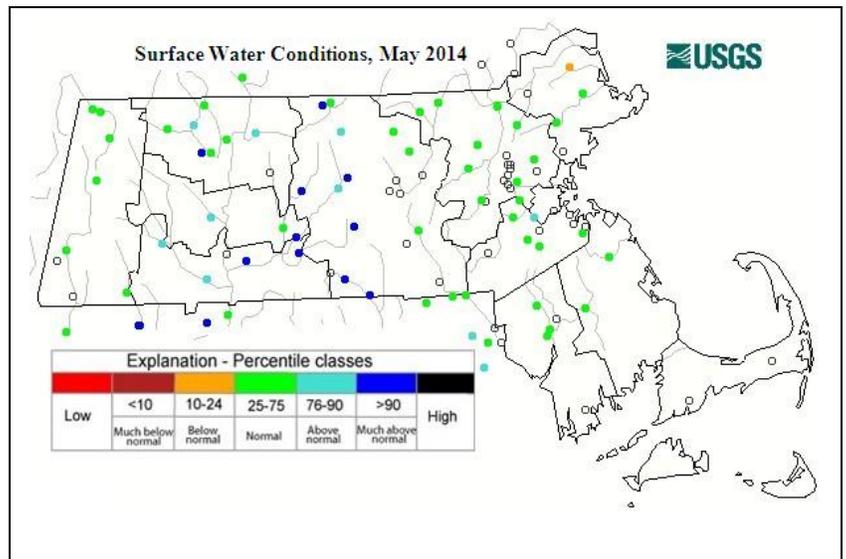
## Streamflow

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

The graph below depicts a composite daily streamflow relative to normal streamflow for Massachusetts for the period of April 29, to June 12, 2014. Flows were generally in the high normal range during the entire period. 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](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 = < 10<sup>th</sup> percentile
- 3 = 10<sup>th</sup> – 24<sup>th</sup> percentile
- 4 = 25<sup>th</sup> – 74<sup>th</sup> percentile
- 5 = 75<sup>th</sup> – 89<sup>th</sup> percentile
- 6 = ≥ 90<sup>th</sup> 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 May or the beginning of June 2014. In southeast MA the level of Assawompsett Pond is below normal for this time of year. This may be the result of a change in reservoir management to avoid flooding around the reservoir.

*May/June 2014 Massachusetts Reservoir Status*

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	98.5	Beverly/Salem	100
Worcester	98	Lynn	84.1
Cobble Mt./ Springfield	94.6	Taunton/New Bedford/Assawompsett	95

Note: NA Indicates data not available for this report

## Drought Indices/Forecasts

### US Drought Monitor

The National Drought Mitigation Center's (NDMC's) June 8, 2014 Drought Monitor Map shown at right indicates abnormally dry conditions in southeastern Massachusetts, Cape Cod, and Martha's Vineyard. The June 17 map shows the same conditions.

### 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.

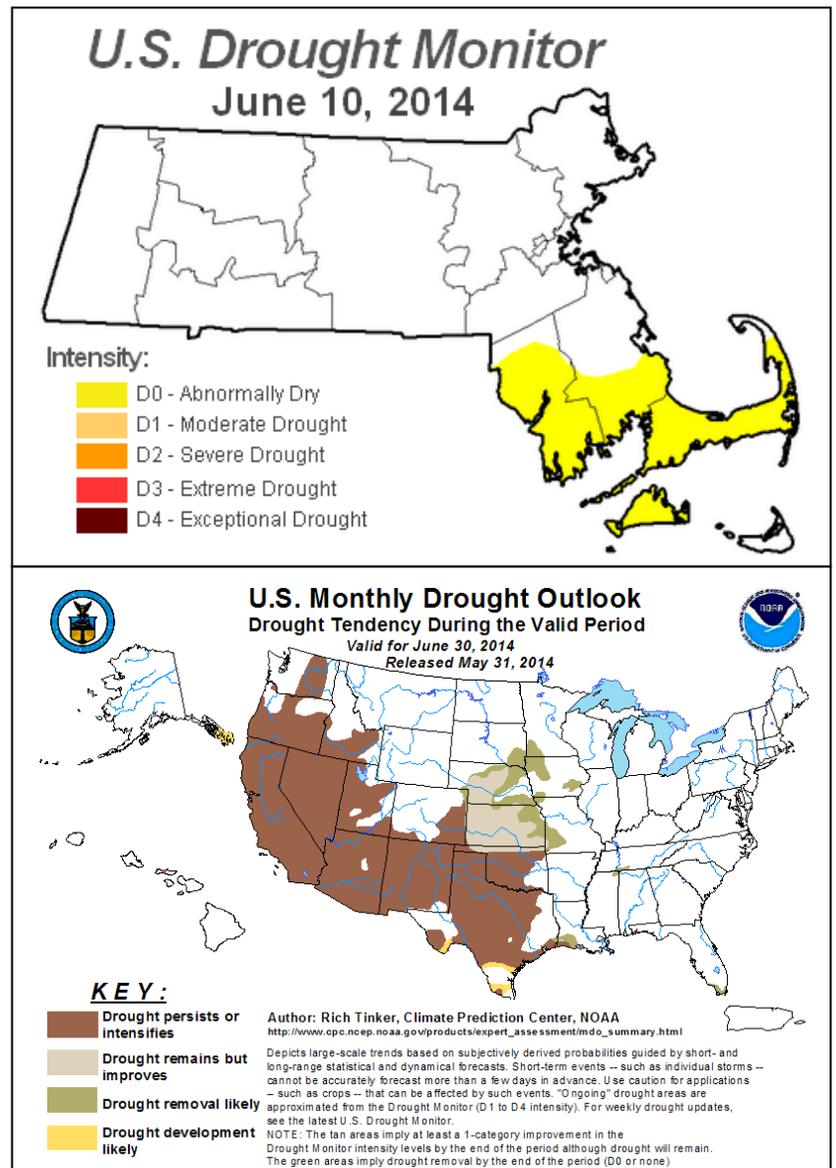
### NWS/NOAA's Climate Prediction Center

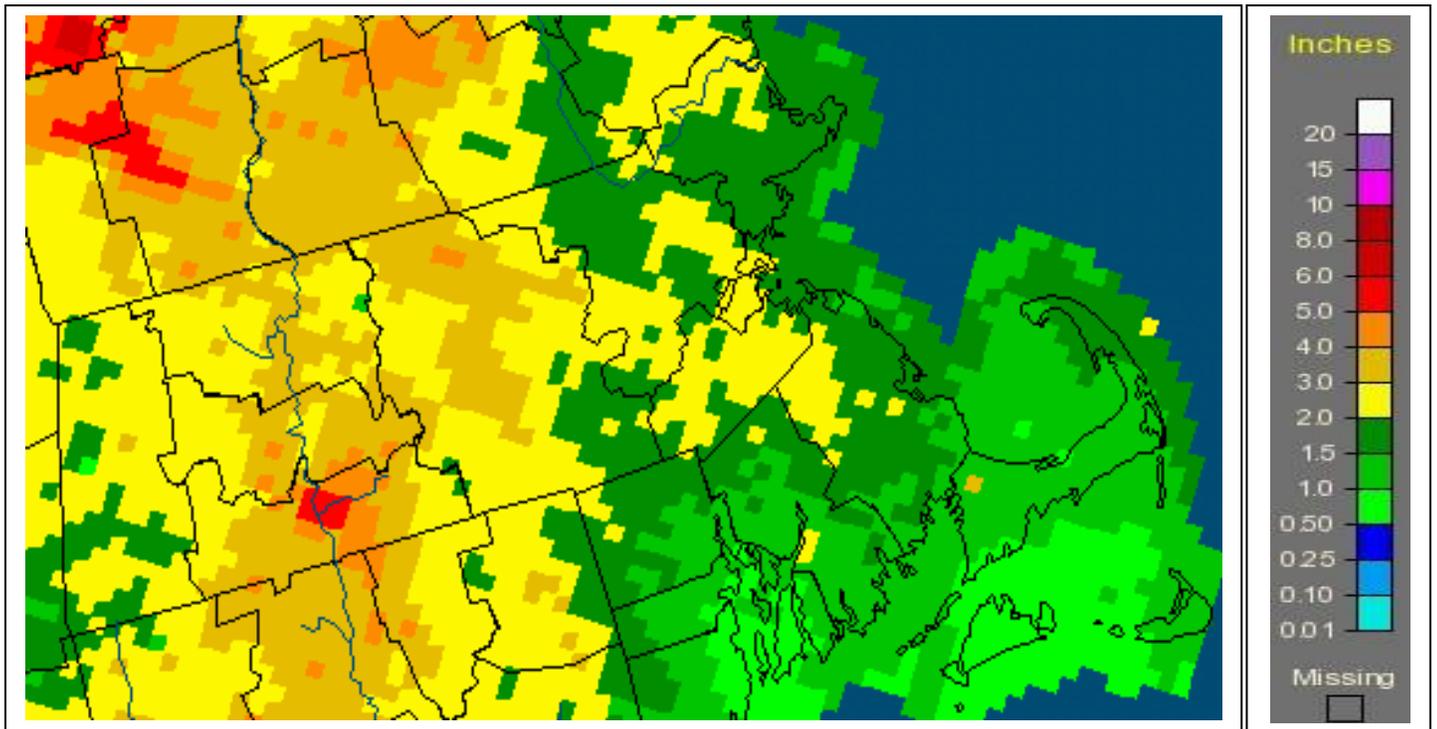
The U.S. Monthly Drought Outlook for June (shown at the right) forecasts normal conditions at the end of the month. The seasonal drought outlook (not shown) predicts that there will be no drought condition through the end of August in Massachusetts.

### Extended Forecasts

Cloudy and showers in southern areas today will give way to dry cooler weather state wide on Friday and Saturday. There will be a warming trend Sunday and early next week and the possibility of a period of showers next week. The National Weather Service Climate Prediction Center's extended 6 to 10-day forecast is for above normal rainfall and normal temperatures. The 8 to 14-day forecast is for above normal rainfall and 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  
MAY 2014**



**GENERAL WATER CONDITIONS IN MASSACHUSETTS - MAY 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	Below Normal

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

**2014 Atlantic Hurricane Season Outlook: Summary**

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## 2014 Atlantic Hurricane Season Outlook: Summary

NOAA's [2014 Atlantic Hurricane Season Outlook](#) indicates that a near-normal or below-normal hurricane season is likely this year. The outlook calls for a 50% chance of a below-normal season, a 40% chance of a near-normal season, and only a 10% chance of an above-normal season. See [NOAA definitions](#) of above-, near-, and below-normal seasons. The Atlantic hurricane region includes the North Atlantic Ocean, Caribbean Sea, and Gulf of Mexico.

The [predicted oceanic and atmospheric conditions across the MDR](#) typify a near- or below-normal Atlantic hurricane season, and contrast with those seen throughout the current high activity era for Atlantic hurricanes that began in 1995.

Based on the current and expected conditions, combined with model forecasts, we estimate a 70% probability for each of the following ranges of activity during 2014:

- 8-13 Named Storms
- 3-6 Hurricanes
- 1-2 Major Hurricanes
- Accumulated Cyclone Energy (ACE) range of 40%-100% of the median.

NOAA does not make seasonal hurricane landfall predictions. Hurricane landfalls are largely determined by the weather patterns in place as the hurricane approaches, which are only predictable when the storm is within several days of making landfall.

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>