

Current Water Conditions in Massachusetts

December 13, 2007



- November precipitation was below normal
- November streamflows were below normal and normal
- November ground-water levels were below normal and normal
- Reservoir levels are generally a little below normal and normal

Precipitation Conditions

A table of November 2007 estimated precipitation statistics, based on precipitation data from the Department of Conservation and Recreation and National Weather Service precipitation monitoring networks is attached. The statewide average precipitation for November 2007 is estimated as 3.59 inches, about 87 percent of normal. The regions of Massachusetts received between 157 percent (Cape Cod and Islands) and 70 percent (Connecticut) of normal precipitation during November. The passage of the remnants of tropical storm Noel early in November affected mainly the eastern part of the State and resulted in the Cape and Islands having above normal rain for the month. Several additional statewide precipitation events during the month helped to maintain near normal rainfall amounts for the month. A map at the back of this report shows the distribution of November total rainfall in New England.

Early December has seen several snow/rain events. As of December 12th, December rain/snow has ranged from about 0.5 to 2 inches of water. The larger amounts fell on the Cape and western Massachusetts.

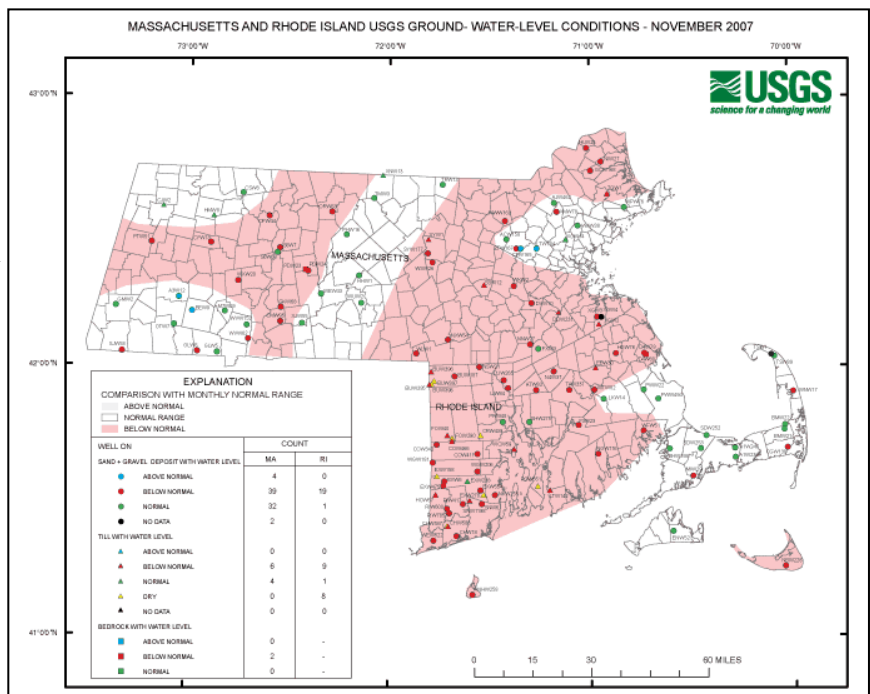
A Drought Advisory for the Connecticut River, Central, Northeast, and Southeast Regions of Massachusetts remains in affect. The Massachusetts Drought Management Task Force is scheduled to meet again on January 17th to re-evaluate hydrologic conditions in Massachusetts.

Ground Water Levels

Ground-water levels reported by the United States Geological Survey (USGS) at the end of November 2007 were generally below normal (pink area on map) in a major portion of the State. Levels were normal (white areas on map) on the Cape/Vineyard/ and Plymouth /Carver areas. Levels were also normal in areas in the northeast, central. northwest, and southwest. Record monthly lows for the end of November were measured in 3 wells in MA.

The USGS ground water level map and a Water Conditions Statement for the end of November 2007 can be viewed at the web site:

http://ma.water.usgs.gov/water/water_g.htm

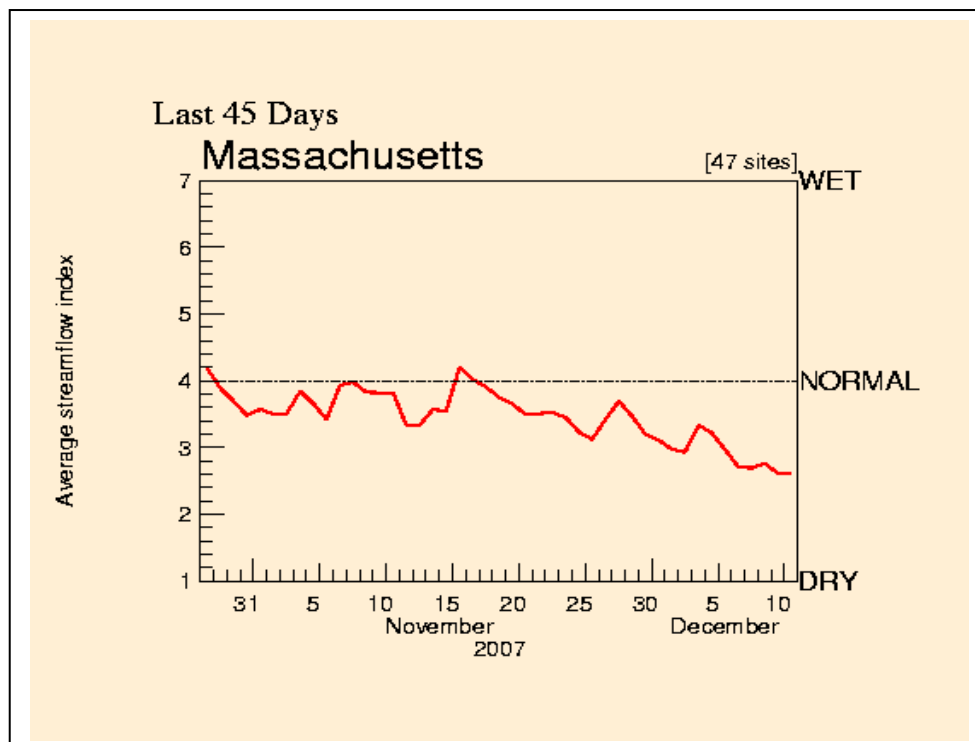
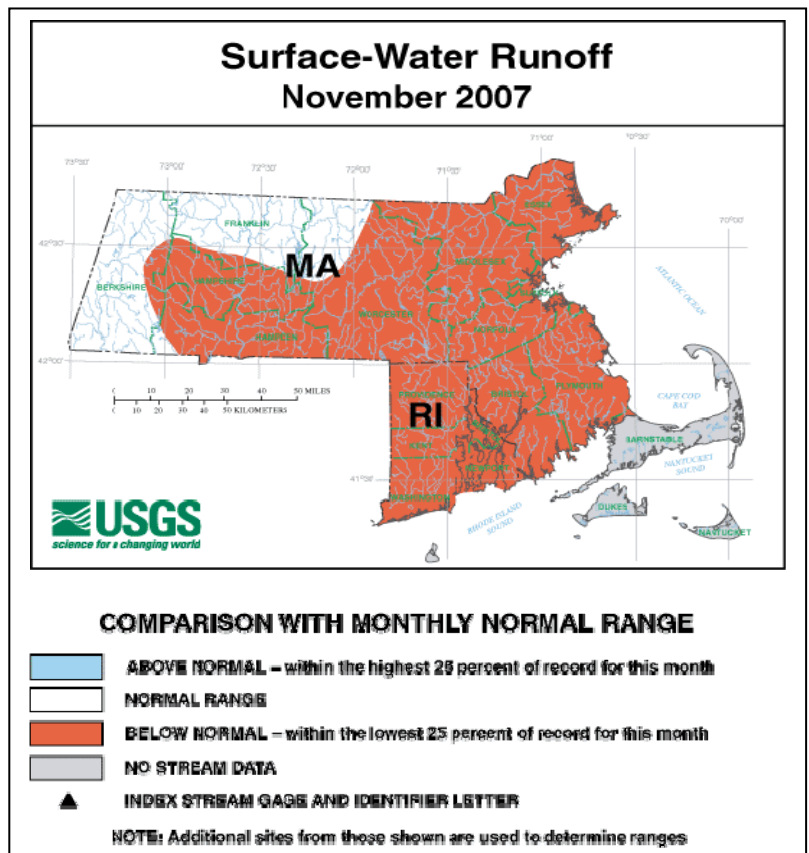


Stream Flow

At the end of November stream flows in the State that are monitored by the United States Geological Survey (USGS) were generally below normal (orange area) in most of Massachusetts. Stream flows were normal (areas in white) in river basins in north central, northwest, west, and southwest Massachusetts.

The graph below depicts a composite streamflow relative to normal streamflow for Massachusetts as of December 11, 2007. The graph is a composite of 46 gages across the state with a long period of record. Slightly below normal streamflow at the beginning of November rose to near normal or slightly above normal in response to rainfall events during the 1st half of the month. Since mid November streamflow has become more below normal in spite of several small precipitation events during that period. In December, two precipitation events that were mainly snow have not contributed significantly to increasing flows to normal levels. Additional information on streamflow is available from the USGS web page:

<http://ma.water.usgs.gov/water/waters.htm>



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

Surface water reservoir percent full values for water supply sources provided by water suppliers are listed below. With the exception of Quabbin Reservoir the reservoir levels listed are reported to be a little below normal for this time of year.

November /December 2007 Massachusetts Reservoir Status

Reservoir/City or Town	Percent Full	Reservoir/City or Town	Percent Full
Quabbin	88	Beverly/Salem	61
Worcester	59	Lynn	49.4
Cobble Mt./ Springfield	72	Taunton/New Bedford/Assawompsett	84.7

Note: N.A. Indicates data not available for this report

Fire Danger

During November the cooler weather and rain/snow events have resulted in a low fire danger and number of fires.

Drought Indices/Forecasts

The National Drought Mitigation Center's (NDMC's) December 11, 2007 Drought Monitor Map of Massachusetts shown at right indicates that about 15 percent of the south-central part of the State is in moderate drought and another 36 percent is abnormally dry.

Standardized Precipitation Index:

The Western Regional Climate Center's (Desert Research Institute, University and Community College System of Nevada) 1, 3, 6, and 12-Month Standardized Precipitation Index through the end of November shows normal, normal, normal/moderately dry, and normal conditions respectively, across Massachusetts.

NWS/NOAA's Climate Prediction Center: The U.S. Seasonal Drought Outlook dated December 6, 2007 shows that the drought in the southeast area of the State is expected to improve and impacts ease through February 2007.

Extended Forecasts

There is 3-10 inches of snow forecast for Thursday, with the higher amounts on the south coast. A major northeaster is forecast to affect Massachusetts on Sunday, possibly depositing substantial amounts of rain and snow across the region. The combination of the two events could deposit up to 3 inches of melted precipitation. The National Weather Service Climate Prediction Center's extended 6 to 10-day forecast predicts normal rainfall and below normal temperatures. The 8 to 14-day forecast indicates above normal rain and temperatures. The 1-month forecast indicates above normal rainfall and below normal temperatures. The 3-month forecast indicates normal rainfall and above normal temperatures.

