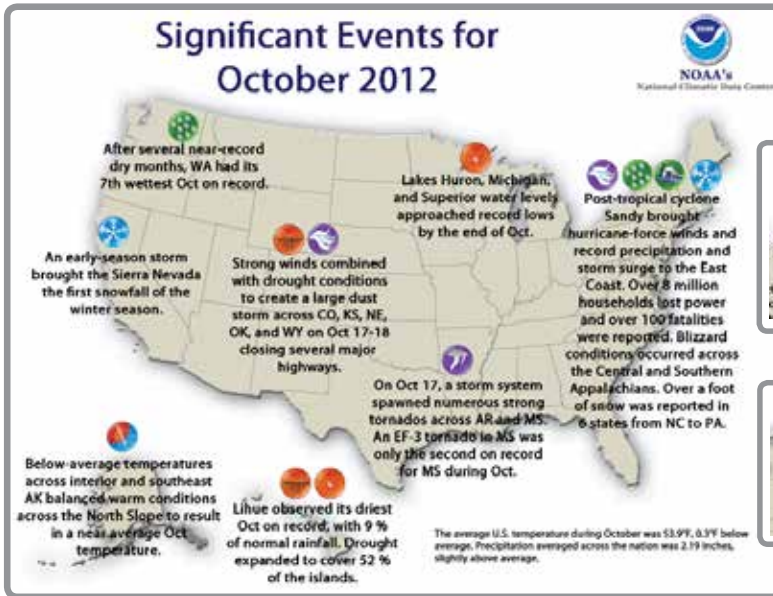


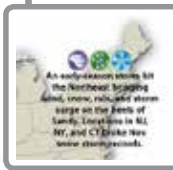
National - Significant Events for September - November 2012



September



November



Highlights for the East

A Historic Hybrid Storm Sandy produced record storm tides at 20+ sites including The Battery, NY, and Sea Bright, NJ. Both broke their old records by 4+ feet. New all-time-low station pressure records were set at Atlantic City, NJ, 948 mb; Philadelphia, PA, 953 mb; Harrisburg, PA, 963 mb; and Baltimore, MD, 964 mb. New York state officials estimate Sandy's cost at \$42 billion and that 305,000 housing units were damaged. In New Jersey, state officials estimate Sandy's cost at \$37 billion and FEMA estimates 72,000 buildings were damaged. Sandy capped an already above normal hurricane season with 19 named storms.

A COOL & DRY NOVEMBER found fourteen of sixteen states had their top 10 driest November since 1895. In fact, ten of sixteen states had their top 5 driest. Connecticut was the driest state, receiving only 0.73" of precipitation instead of their normal 4.37" for November. Six states also reported November 2012 to be one of their top 20 coolest.

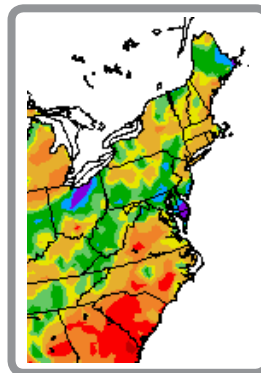
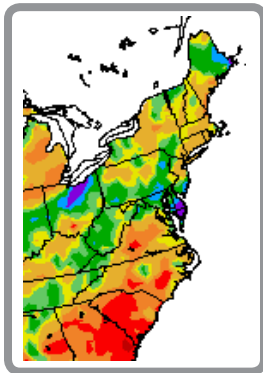
The average temperature for the contiguous U.S. during autumn was 54.7°F, which is 1.1°F above average. This makes it the 21st warmest autumn on record. The total autumn precipitation in the contiguous U.S. was below normal. Receiving 5.71", the nation was 1.0" below average.

Regional - Climate Overview for September - November 2012

Temperature and Precipitation Anomalies

Departure from Normal Temperature (F)
9/1/2012 - 11/30/2012

Percent of Normal Precipitation (%)
9/1/2012 - 11/30/2012

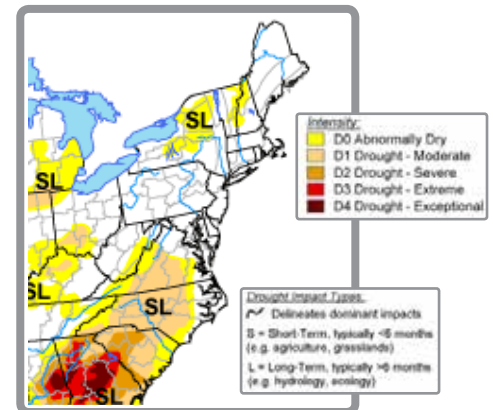


While summer 2012 saw temperatures that averaged above normal, autumn 2012 was slightly cooler than normal. With an average temperature of 53.0°F, it was 0.6°F below normal in the Eastern Region. Nine states were cooler than normal while seven states were slightly warmer. Of the cool states, North Carolina was the coolest at 1.7°F below average, their 16th coolest autumn since 1895. And of the warm states, Vermont was the warmest at 1.1°F above average.

The dry conditions of summer persisted right into autumn with the Eastern Region 8% drier than normal. While nine states were drier than normal, seven states were wetter than average. Drought-ridden South Carolina was the driest state at 45% below normal for autumn precipitation. It was their 12th driest autumn in 118 years. With record rainfall from Sandy, Delaware was the wettest state with 20% more precipitation than normal. It was Delaware's 18th wettest autumn on record.

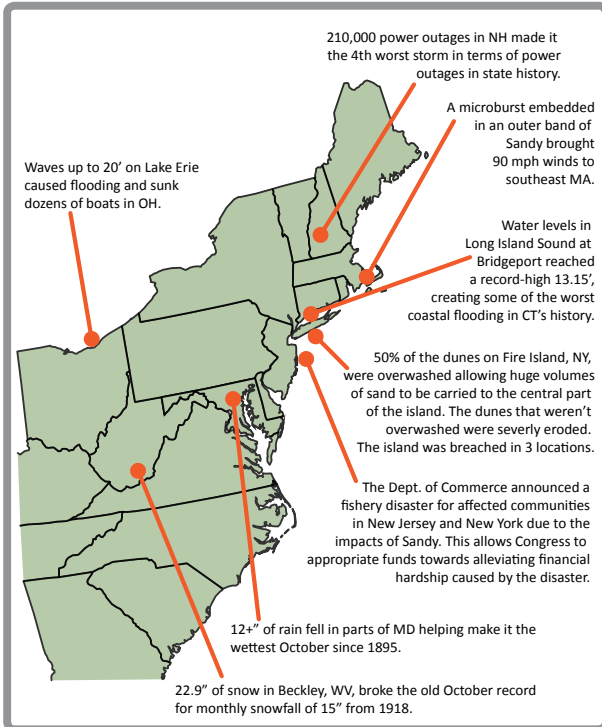
Drought in the East

U.S. Drought Monitor
12/4/2012



Abnormal dryness in Virginia and the Carolinas at the start of autumn was exacerbated by a drier than normal November. This created widespread D1 drought conditions with localized areas of D2 and D3 in South Carolina by the end of November. While conditions gradually improved across the northern half of Ohio, D0 and D1 conditions continued in the southwest part of the state. Abnormal dryness in upstate NY continued all through autumn.

Regional - for September - November 2012



Energy

8.5 million customers in 21 states were without power due to Sandy. The most affected state, New Jersey, had 65% of its customers without power. Damage to terminals, lack of power to pump fuel, and long lines at functioning terminals led to a fuel shortage in parts of New Jersey and New York. 12 northern New Jersey counties implemented gas rationing for 10 days and New York City implemented it for 2 weeks.

Transportation

According to the Metropolitan Transportation Authority, Sandy was the most destructive storm in the 108-year history of New York City's subway system. All 7 tunnels under the East River in Manhattan were flooded. Air travel was at a near standstill with 21,000+ flights into and out of North America cancelled. In the past seven years, only the Blizzard of 2010 grounded more flights. NOAA's National Ocean Service helped coastal communities recover from **Hurricane Sandy**. For more information: <http://oceanservice.noaa.gov/hazards/hurricanes/nosresponse12.pdf>

Agriculture

Drought caused 51% of corn in Ohio to be in poor or extremely poor condition at the end of September. The drought and spring frosts caused the Concord grape crop to be smaller and harvested earlier than expected. A slightly warmer and wetter October contributed to record peanut crops in Virginia and North Carolina and record soybean yields in North Carolina.

Recreation/Tourism

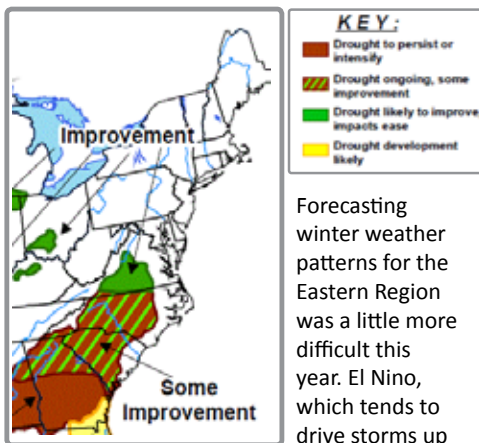
New Jersey state officials said casino wins were down 28% in November 2012 due to Sandy. Sugar Mountain Ski Resort in North Carolina had its earliest opening day in its 43 year history due to snow from Sandy.

Regional Outlook - for Winter 2013

Eastern Region Partners

U.S. Seasonal Drought Outlook

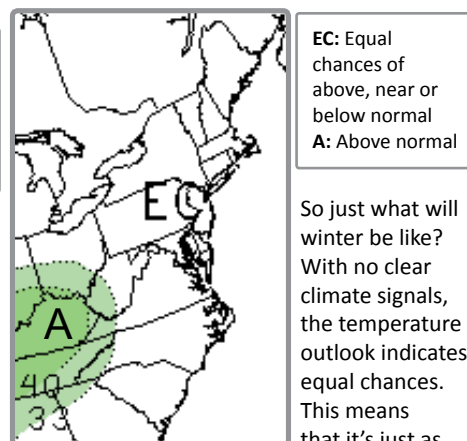
Drought Tendency from 12/6/2012 - 2/28/2013



did not develop as expected. In fact, with equatorial Pacific water temperatures near average, ENSO (El Nino/Southern Oscillation) neutral conditions are forecast. Another wild card, the North Atlantic Oscillation (NAO), is difficult to forecast more than a few weeks in advance. During positive NAO the East Coast tends to be warmer and wetter while negative NAO brings cooler and drier conditions.

3-Month Precipitation Outlook

Valid for January - March 2013



So just what will winter be like? With no clear climate signals, the temperature outlook indicates equal chances. This means that it's just as likely for the

Eastern Region to experience below average temperatures as it is to have above or near average temperatures. As for the precipitation outlook, equal chances are also indicated for most areas. However, a few forecast models suggest parts of North Carolina, West Virginia, Virginia and Ohio have an increased chance of above normal precipitation. The drought outlook indicates improving conditions in Ohio and Virginia and some improvement in the Carolinas.

National Climatic Data Center

www.ncdc.noaa.gov

Northeast Regional Climate Center

www.nrcc.cornell.edu

Southeast Regional Climate Center

www.sercc.com

National Integrated Drought Information System (NIDIS)

www.drought.gov

Northeast River Forecast Center

www.nrfc.noaa.gov

Mid-Atlantic River Forecast Center

www.marfc.noaa.gov

Climate Prediction Center

www.cpc.noaa.gov

NOAA Fisheries Service - Northeast Fisheries Science Center

www.nefsc.noaa.gov

Carolinas Integrated Sciences and Assessments

www.cisa.sc.edu

Consortium on Climate Risk in the Urban Northeast

www.ccrun.org

NOAA's North Atlantic, South Atlantic, and Great Lakes Regional Collaboration Teams

www.regions.noaa.gov/

Eastern Region State Climatologists

www.stateclimate.org

Cooperative Institute for North Atlantic Research

www.cinar.org

NWS Eastern Region's Climate Service

nws.noaa.gov/om/csd/index.php?section=programs#eastern