

Winter Storms of February 2014 – A Repeat of January 2014



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Topics

- Discuss Wednesday February 5th, 2014 Winter Storm affecting the Northeast and Mid-Atlantic states.
- Discuss the winter storm of Tuesday February 11th-Thursday February 13th across the Eastern US.
- Discuss the Saturday February 15th Major Winter Storm/near Blizzard that Affected Southeastern New England.
- Reminder: Winter Weather Safety Tips and Measuring Snow and Ice
- Reminder: Situational Awareness and Disaster Intelligence
- Topic for next month's net – 2014 National Hurricane Conference and Amateur Radio Participation

Wednesday February 5th 2014 – Significant Snowstorm for Northeast/Mid-Atlantic States

- Significant Snowstorm with very high snowfall rates impacted much of Southern New England.
 - Widespread 6-12” of snow along and north of I-95 corridor.
 - Snowfall rates of 2-4” at the height of the storm.
 - South of the I-95 corridor 2-6” of snow occurred before a changeover to rain with less on Nantucket Island.
 - Winter Storm severely impacted the morning commute with a modest impact to the evening commute.
 - Heavy snowfall rates with similar amounts of snow were reported through the New York City area and the mid-atlantic states.
 - Continued the trend of mid-week storms for Southern New England.

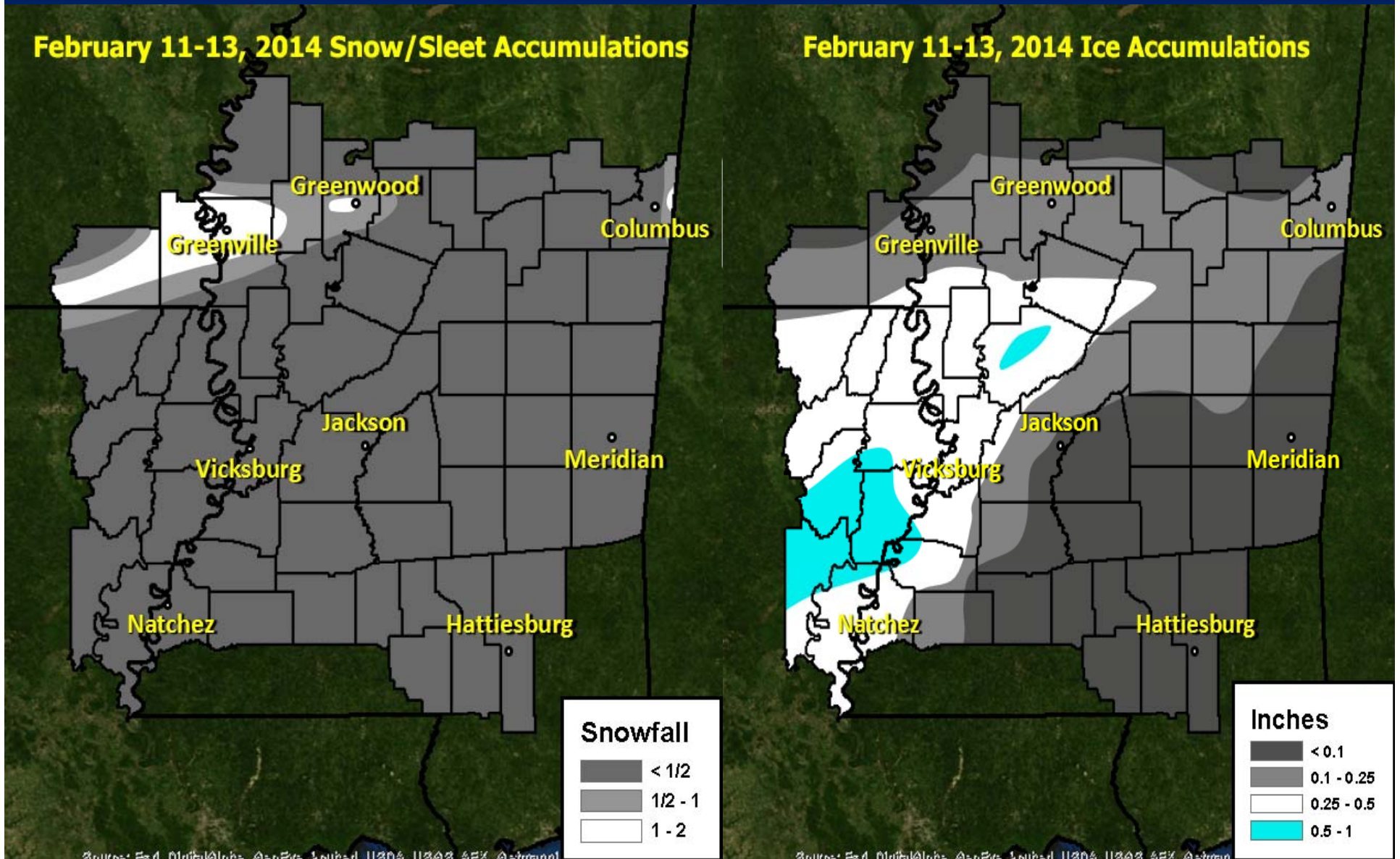
February 11th-February 14th 2014 Major Winter Storm for the Eastern United States

- February 11th-14th 2014 Major Winter Storm had significant impacts across much of the Eastern United States.
 - Starting in the Southeast United States:
 - Significant ice storm for portions of Mississippi, Alabama, Georgia and South Carolina causing damage to trees and power lines and power outages with the heaviest damage in portions of Georgia and South Carolina.
 - Several hundred thousand people without power in this region. Widespread school and business closings.
 - Significant snowstorm with some icing for areas of inland North Carolina, Virginia, Washington DC, the Delmarva and Eastern Pennsylvania, New Jersey through the New York City area with many closings and power outages in southern areas.
 - The following information provided by Central Carolina SKYWARN Coordinator-Virginia Enzor-NC4VA:
 - Cars abandoned in North Carolina due to the heavy snowfall and lack of plowing and treated roads.
 - Widespread snowfall greater than 3-4 inches in many areas with additional sleet and freezing rain accumulations.
 - Central Carolina SKYWARN was active for 26.5 hours over 2 days (2/12/14 730 AM-Midnight, 2/13/14 from 630 AM-430 PM) and took over 250 reports.
 - Several Amateur Radio repeaters suffered ice damage and went off the air.
 - Numerous road closures and power outages.

February 11th-February 14th 2014 Major Winter Storm Impacts on New England

- February 11th-14th 2014 Major Winter Storm also impacted New England
 - Storm track allowed for mostly rain along the immediate South Coast of Massachusetts, Cape Cod and the Islands as the center of low pressure tracked right over this region.
 - Rain/Snow line would make it as far inland as the I-95 corridor after 3-6" of snow accumulation in interior Southeast Massachusetts and South-Central Rhode Island.
 - Widespread 6" or more of snow occurred across the rest of interior Southern New England with amounts as high as 10-14" by the time the storm wound down Friday.
 - Some isolated pockets of tree and wire damage and power outages due to strong winds and heavy wet snow and ice clinging to trees and power lines.
 - Wind gusts in the 40-55 MPH range were common with isolated strong wind gusts measured in Rockport Massachusetts as high as 66-72 MPH as the storm departed the region.
 - SKYWARN in Southern New England was active for much of Thursday February 13th starting at 8 AM and lasting through Midnight Thursday with remote gathering of final snowfall totals Friday Morning February 14th.

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14

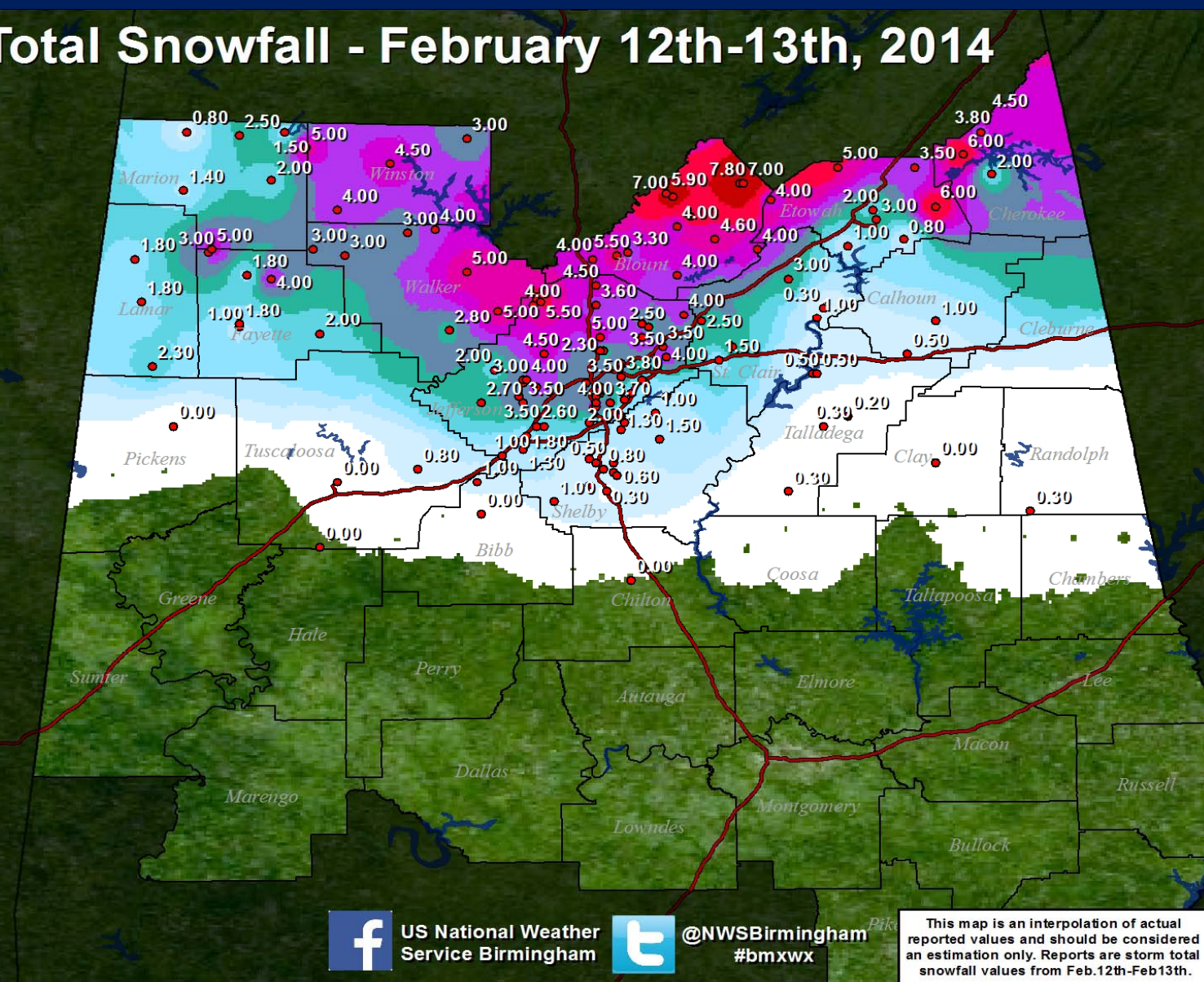
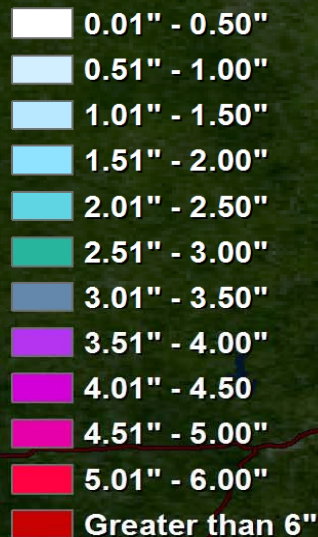


Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14

Storm Total Snowfall - February 12th-13th, 2014



Snowfall (Inches)



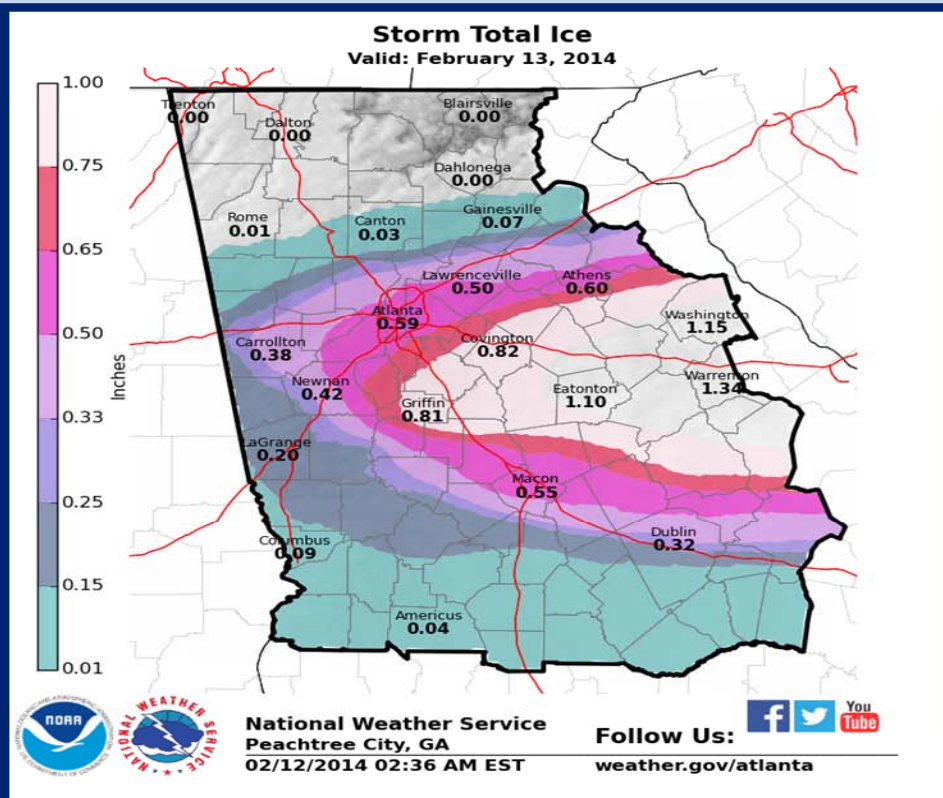
US National Weather
Service Birmingham



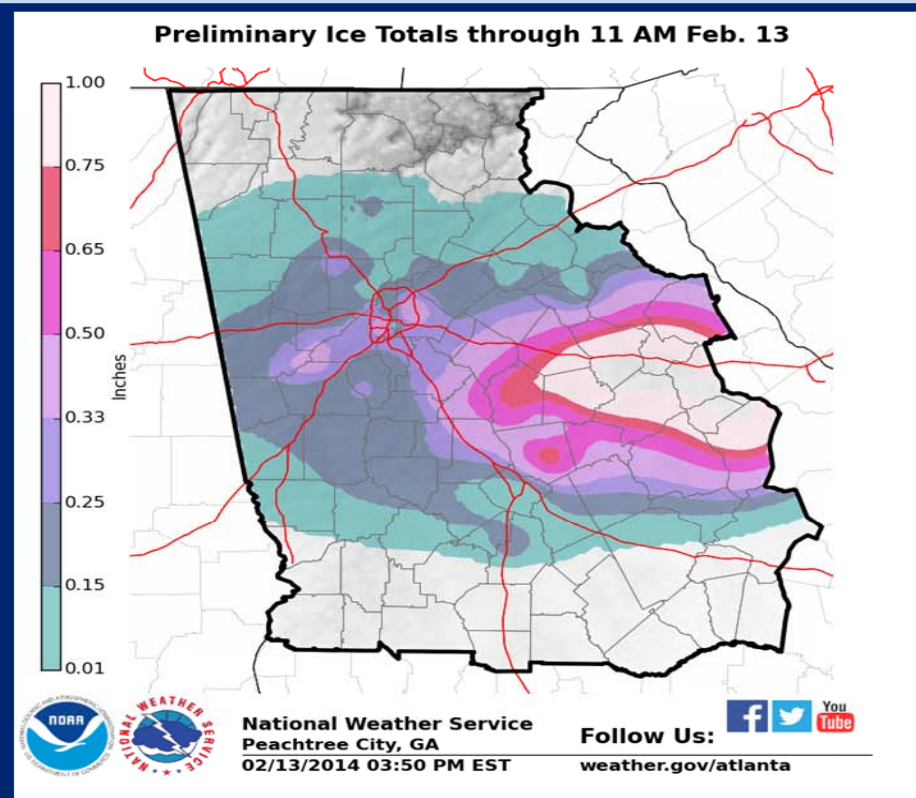
@NWSBirmingham
#bmwxw

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14

Comparison of Freezing Rain Forecast vs. Observed Accumulations



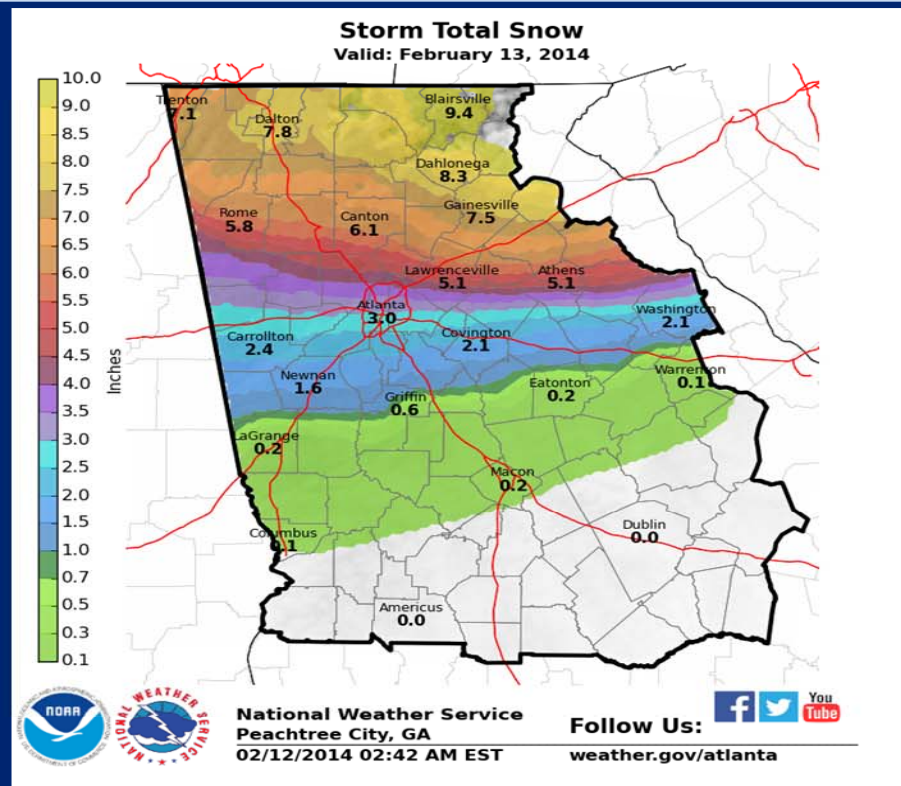
Forecast



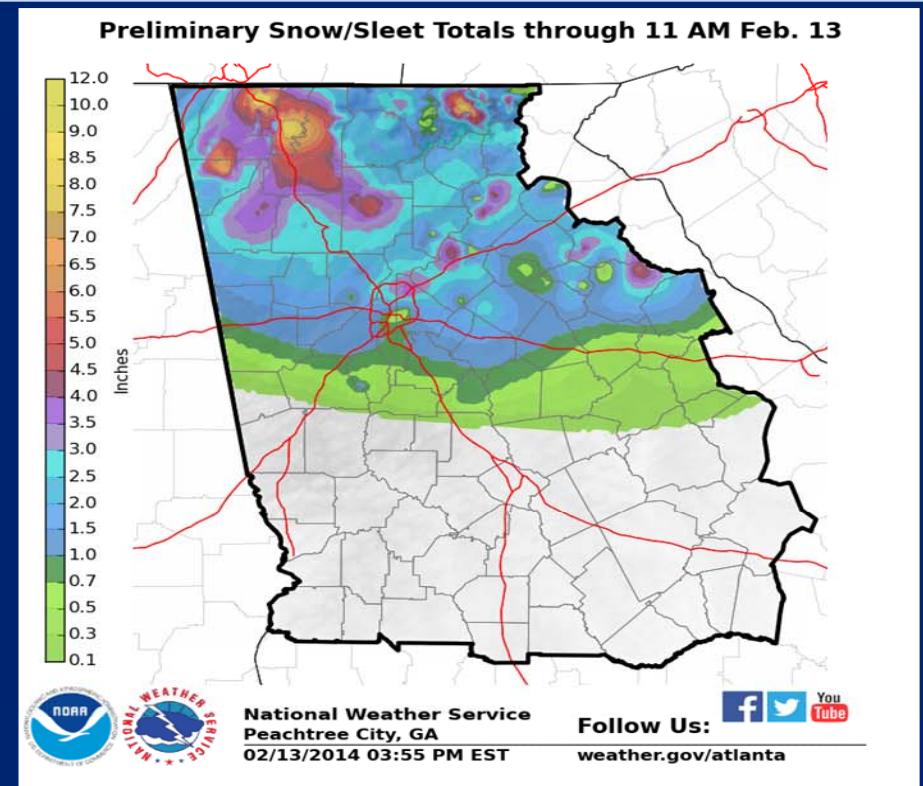
Observed

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14

Comparison of Snow and Sleet Forecast vs. Observed Accumulations



Forecast



Observed

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14



Sandersville, GA – Courtesy – NWS PTC GA



Douglasville, GA – Courtesy – NWS PTC GA



Sandersville, GA – Courtesy – NWS PTC GA



Peachtree City, GA – Courtesy – NWS PTC GA

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14



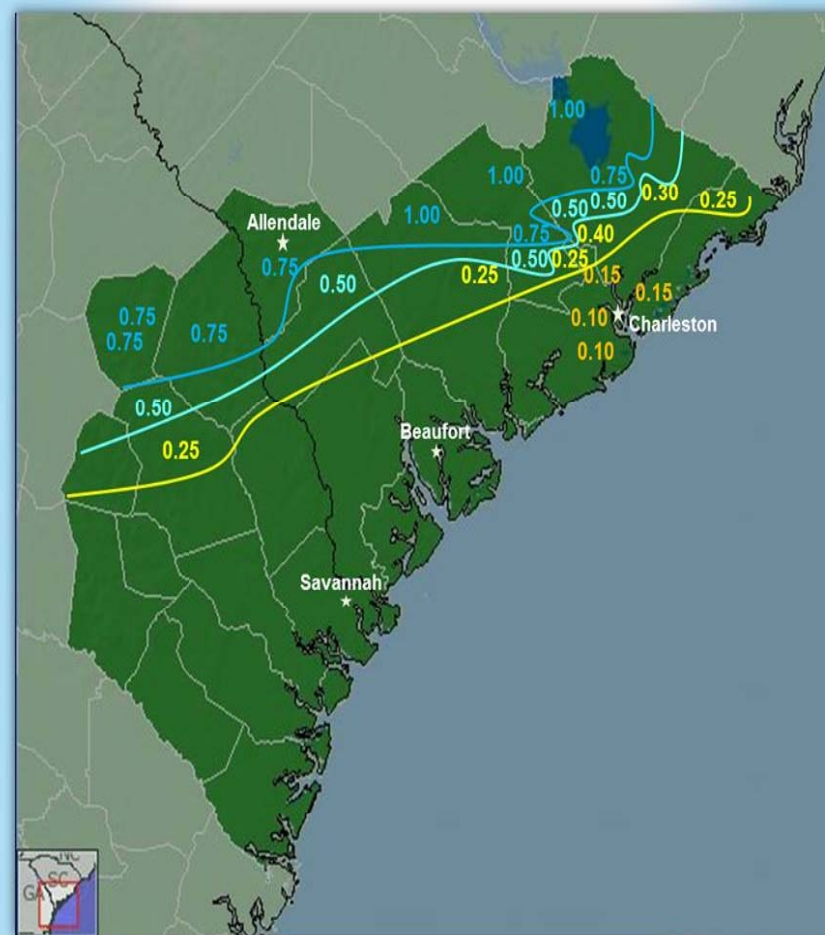
NATIONAL WEATHER SERVICE
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Select Photos from Feb 11-12 Ice Storm

Preliminary Ice Accumulation Totals



Weather Forecast Office
Charleston, SC

weather.gov/chs @NWSCharlestonSC
US National Weather Service Charleston SC

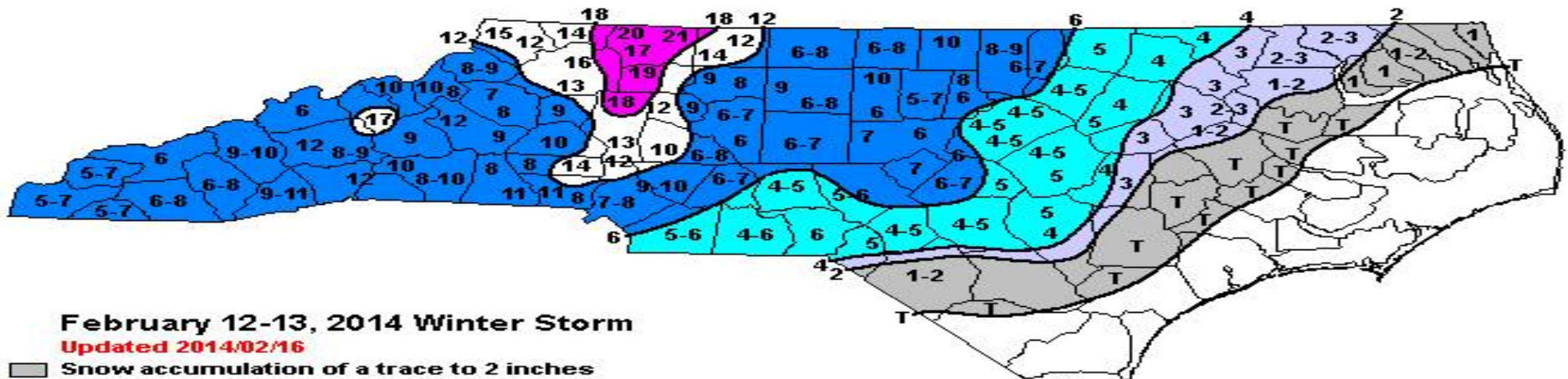
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2/12/2014 8:01 PM

Weather Forecast Office
Charleston, SC

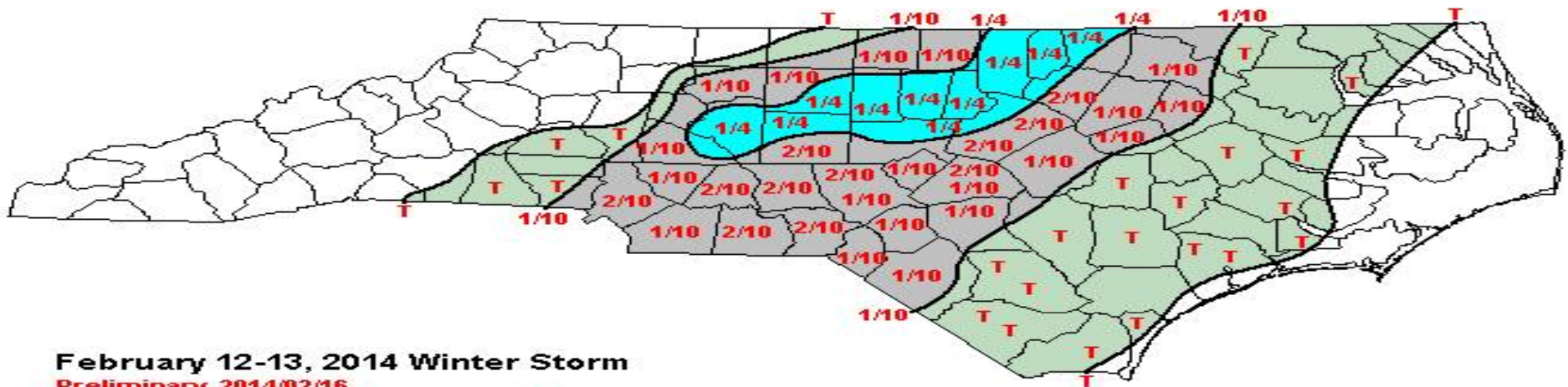
weather.gov/chs | @NWSCharlestonSC

GRAPHIC CREATED:
2/13/2014 9:39 AM

Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14



Data analysis - Phillip Badgett
Graphic - Brandon Vincent
NWS Raleigh, NC
www.weather.gov/raleigh



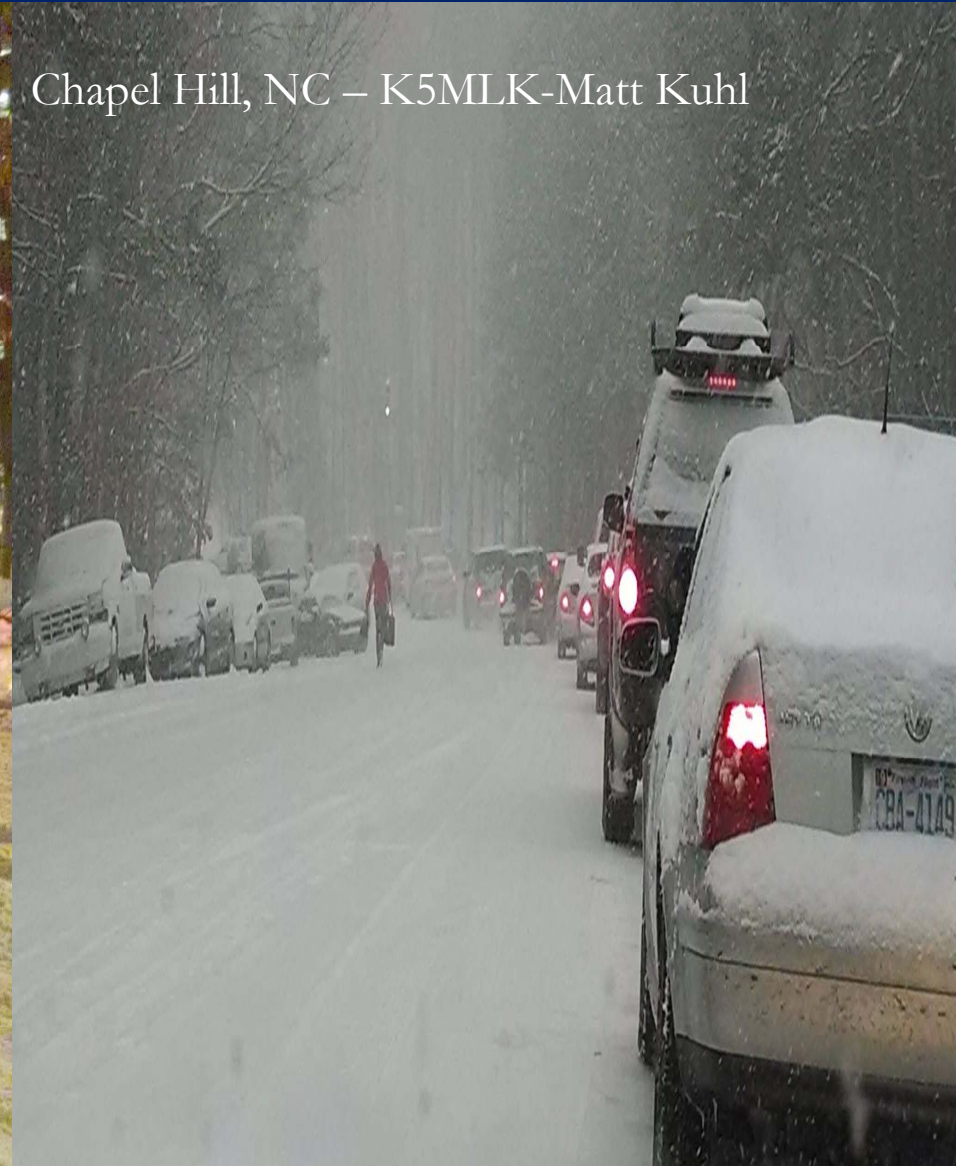
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Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14

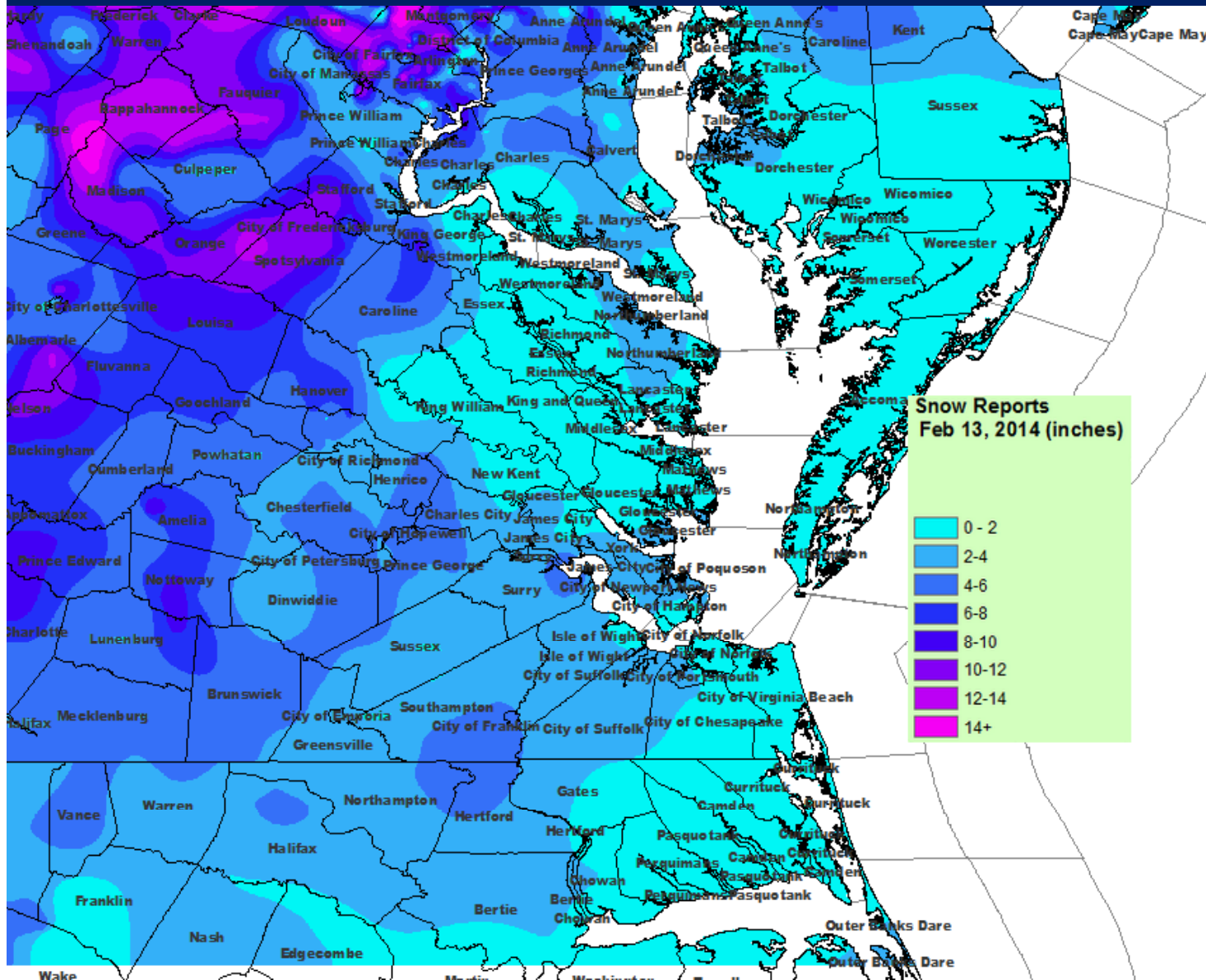
Chapel Hill, NC – K5MLK-Matt Kuhl



Chapel Hill, NC – K5MLK-Matt Kuhl



Major Winter Storm for Southeast US – Tuesday 2/11/14-Thursday 2/13/14



Saturday February 15th-Sunday February 16th 2014 Major Winter Storm/Near Blizzard for Southeast New England

- Significant Snowstorm with near blizzard conditions impacted Southeastern New England.
 - Widespread 6-12" of snow with isolated amounts up to 15.5" as reported in Sandwich, Massachusetts.
 - Snowfall rates of 2-4" at the height of the storm which has been a common theme with winter storms in Southern New England this season.
 - Heavy wet snow clinging to trees and power lines coupled with strong to damaging winds resulted in scattered pockets of trees/wires down & power outages over Cape Cod and South Coastal Massachusetts.
 - Many Amateur Radio Operator and SKYWARN Spotter wind instruments were rendered inoperable due to wet snow clinging and freezing the wind cups. Accurate wind measurements from Cape Cod in this event were limited.
 - Nantucket Island was the only area that had received mostly rain with a changeover to heavy wet snow before the storm ended.

Saturday February 15th-Sunday February 16th 2014 Major Winter Storm/Near Blizzard for Southeast New England



Notable Snow Totals

New Hampshire

- Hudson 2.8
- Nashua 2.7

Massachusetts

- Sandwich 15.0
- Bourne 11.0
- Kingston 10.6
- Duxbury 10.3
- Fairhaven 10.0
- West Tisbury 8.0
- South Yarmouth 8.0

Connecticut

- Moosup 5.8
- East Killington 4.6

Rhode Island

- Westerly 8.0
- Little Compton 7.5
- Bristol 7.0
- Cumberland 6.1



Website: www.weather.gov/boston

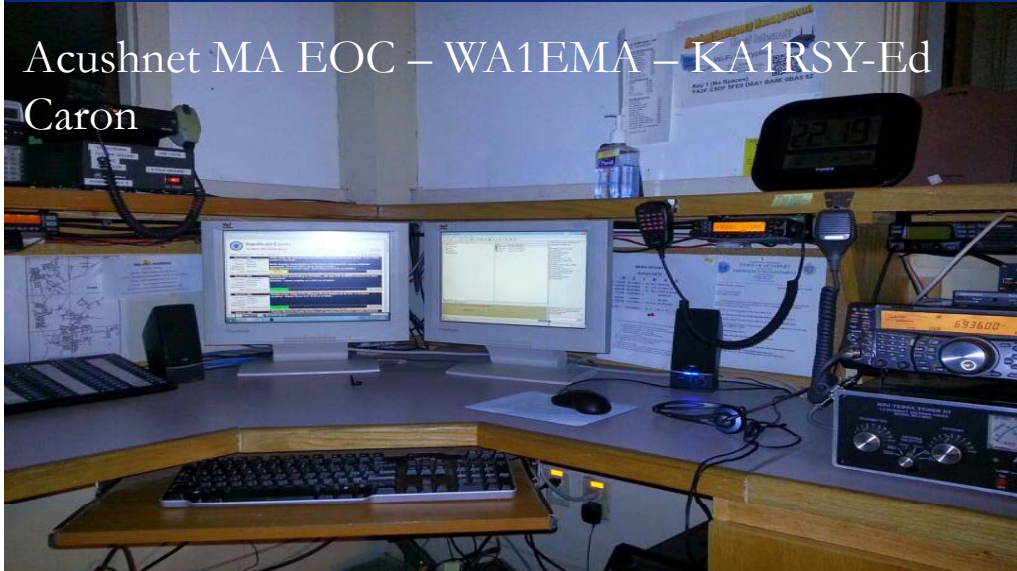
Twitter: [@NWSBoston](https://twitter.com/NWSBoston)

Facebook: <http://www.facebook.com/US.NationalWeatherService.Boston.gov>

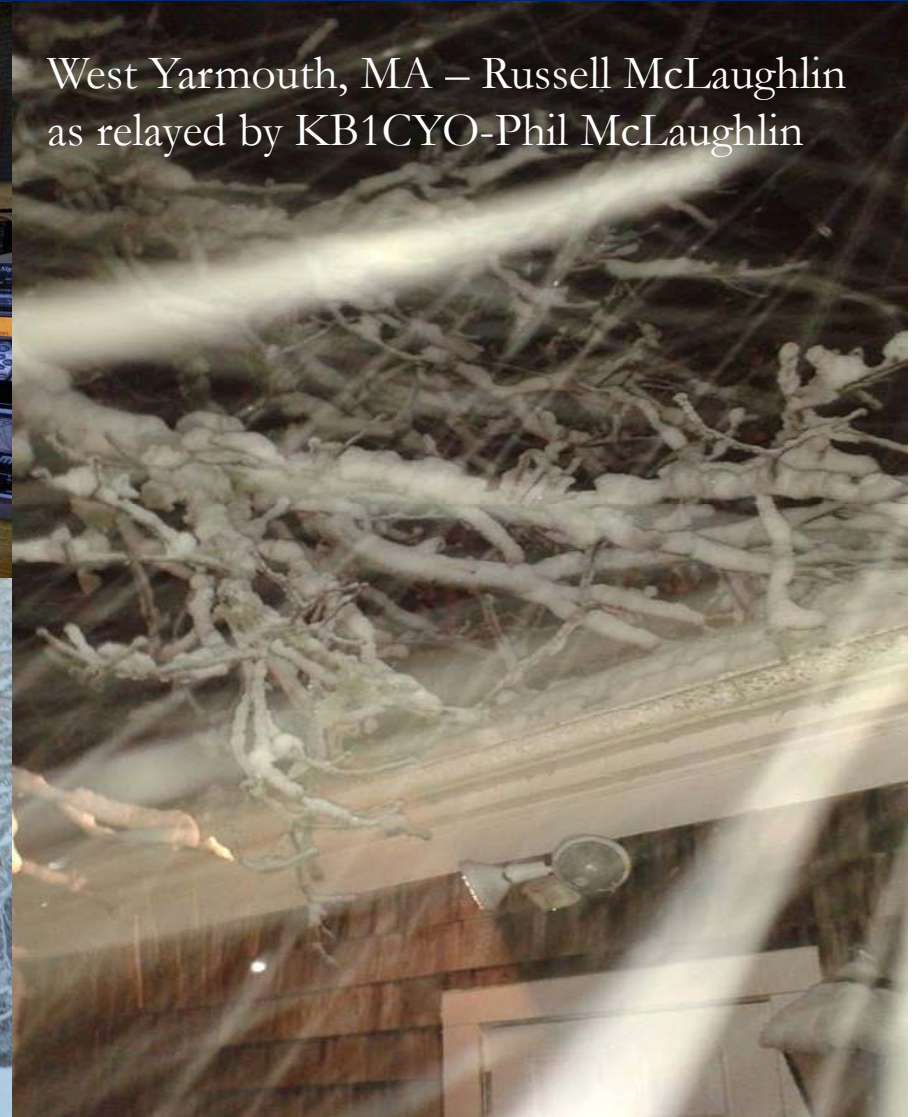


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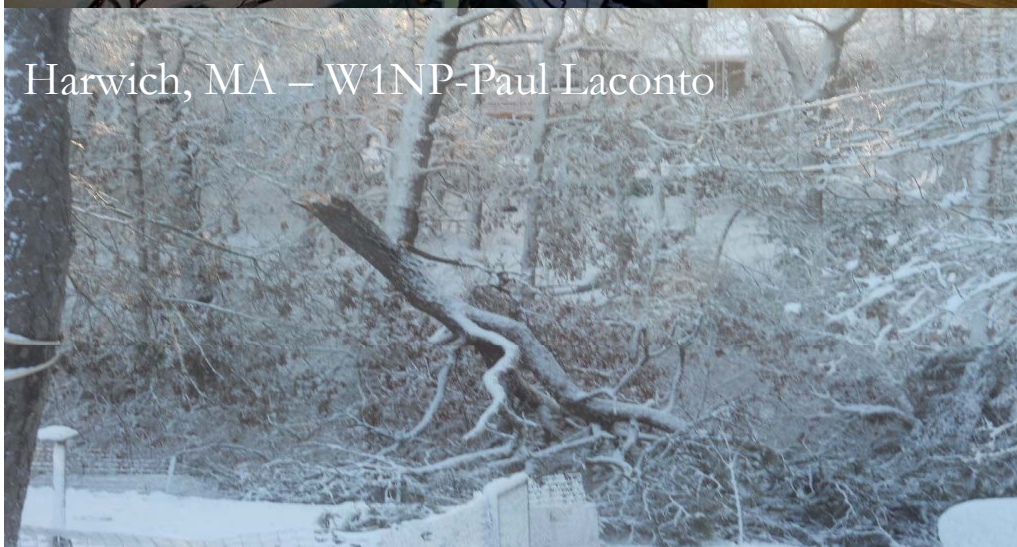
Acushnet MA EOC – WA1EMA – KA1RSY-Ed
Caron



West Yarmouth, MA – Russell McLaughlin
as relayed by KB1CYO-Phil McLaughlin



Harwich, MA – W1NP-Paul Laconto



Measuring Snow and Ice

- To Measure Snow and/or sleet, you want to find a flat surface that is not subjected to blowing and drifting snow where possible to avoid drifts and bare spots.
 - In a blizzard or near blizzard scenario, this may be very difficult to do but find the best flat surface and also measure the drift and take into account the bare spot value as well.
- Take up to 10 measurements and average the value. Round to the nearest tenth of an inch.
- For Ice accretion, you measure ice radially off a tree branch or other surface where you can actually measure the ice in a radius.
 - You may also measure across the entire object and then divide by 2 to get the radial measurement.
- If older snow is on the ground, be sure to delineate snow from the new storm versus snow from prior storms so your total is accurate for the present storm.
- Complete snow measuring information including how to melt the snow can be found via the following link:
 - http://www.nws.noaa.gov/om/coop/reference/Snow_Measurement_Guidelines.pdf

Situational Awareness/Disaster Intelligence Information

- Amateur Radio is well known for being there 'when all else fails'.
- An equally important mission for Amateur Radio is the ability to gather quality situational awareness/disaster intelligence information through SKYWARN during weather and other significant events.
- Snow and Ice reports during winter storms and winter weather related accident/traffic jam info can be very critical particularly in Southeast US states when they receive rare winter storms.
- Damage and power outage reports for winter storms and other weather events are not only helpful for SKYWARN and NWS but for Emergency Management and other entities.
- Supporting and helping to manage other social media outlets can also be helpful and can be vetted by a strong Amateur Radio Network capable of providing situational awareness.
 - Highly encourage local SKYWARN Groups to obtain a Facebook page/twitter handle.
- Amateur Radio Operators are considered by FEMA's Craig Fugate 'the inventors of social media'.
 - Our future in emergency communications is the continued creation of as well as management of social media/situational awareness and disaster intelligence.

Winter Weather Safety Tips

- Assure your car is winterized before entering the winter season.
- Have a winter storm survival kit in your car in case you get stuck in a winter storm including non-perishable goods where possible.
- Dress in layers versus one large winter jacket to stay warm.
- Know the difference between Winter Storm Watches, Warnings and Advisories.
- Some useful winter weather resource links via the National Weather Service:
 - Winter Weather Preparedness Web Site:
<http://www.nws.noaa.gov/om/winter/index.shtml>
 - Winter Storms Safety Tips Pamphlet:
http://www.nws.noaa.gov/om/winter/resources/Winter_Storms2008.pdf
 - NOAA National Weather Service Weather Terms:
<http://www.noaanews.noaa.gov/stories/s794c.htm>

Key Web Site Resources for this Presentation

- Winter Storm Information from various NWS Offices:
 - http://www.srh.noaa.gov/bmx/?n=winter_02122014 (NWS Birmingham, AL (BMX))
 - http://www.srh.noaa.gov/bmx/?n=research_winter2014 (NWS Birmingham Alabama (BMX) Research)
 - http://www.srh.noaa.gov/jan/?n=2014_02_11_12_winterstorm (NWS Jackson Mississippi (JAN))
 - http://www.srh.noaa.gov/ffc/?n=20140212_winterstorm (NWS Peachtree City Georgia (FFC/PTC))
- Amateur Radio Operators and SKYWARN weather spotters are encouraged to follow their NWS Forecast Office Twitter feed and 'like' their Facebook page.
 - Many of the NWS Office graphics were provided via images from the NWS Forecast Office Facebook page and this info may not always be on the NWS Forecast Office web site.
 - Check your local NWS Office Web Site for information on their Facebook page and Twitter feed.
- Other key web site resources listed throughout this presentation.