

Special Report: Boston is Big-Time Buried

What can only be called an “off-the-rails” Boston winter continues as February winds down. Four intense winter storms collectively deposited more than **90 inches in just a month**: an all-time record for any 30-day period in “Beantown”.



Boston: A victim of “Massachusetts Mayhem” at the hands of excessively snowy skies. CBS News images.

Economic losses are mounting up from the snow, wind and deep cold. Thousands of flights to and from Logan International Airport have been scrubbed over the past month, and restricted motor vehicle travel is hurting commerce in the city as people can't get out to buy and sell.

And then there are the roof collapses, possibly in the hundreds, not only in Boston but northward into snow-clogged New Hampshire and Maine too.



West Newbury, Mass: it looks like a tornado could have hit this building, but it's just heavy-duty snow. / David Frank

Losses from collapsed roofs and ice dams will likely soar into the hundreds of millions with a wide variety of structures already affected: everything from a Lowe's store and a recycling center, to an auto repair shop, a piano store, and people's homes. The piano store was the home of a piano owned by Liberace worth half a million. It's unknown at this moment how much damage it received.

Wayne Yavlonsky, a resident of Billerica (a Boston suburb), was sitting at home when he heard a loud crack and next thing he knew the roof caved in. A disabled man, he was trapped inside but was rescued by emergency responders. Officials say the house will have to be torn down. In Newburyport, 72 people had to leave their homes in the frigid conditions after the roof of an apartment building collapsed.

Seabrook, New Hampshire saw an entire building buckle and fail under the weight of the snow:



This carpet liquidation business in Seabrook was crushed under the massive snowdrifts. WCVB-TV image

What's more, there will be lots of hidden damage revealed only after the snow is gone. We're talking caved in roads, flooded basements, and lots of leaky roofs for starters. Serious flooding is a real possibility if a quick thaw comes in March.



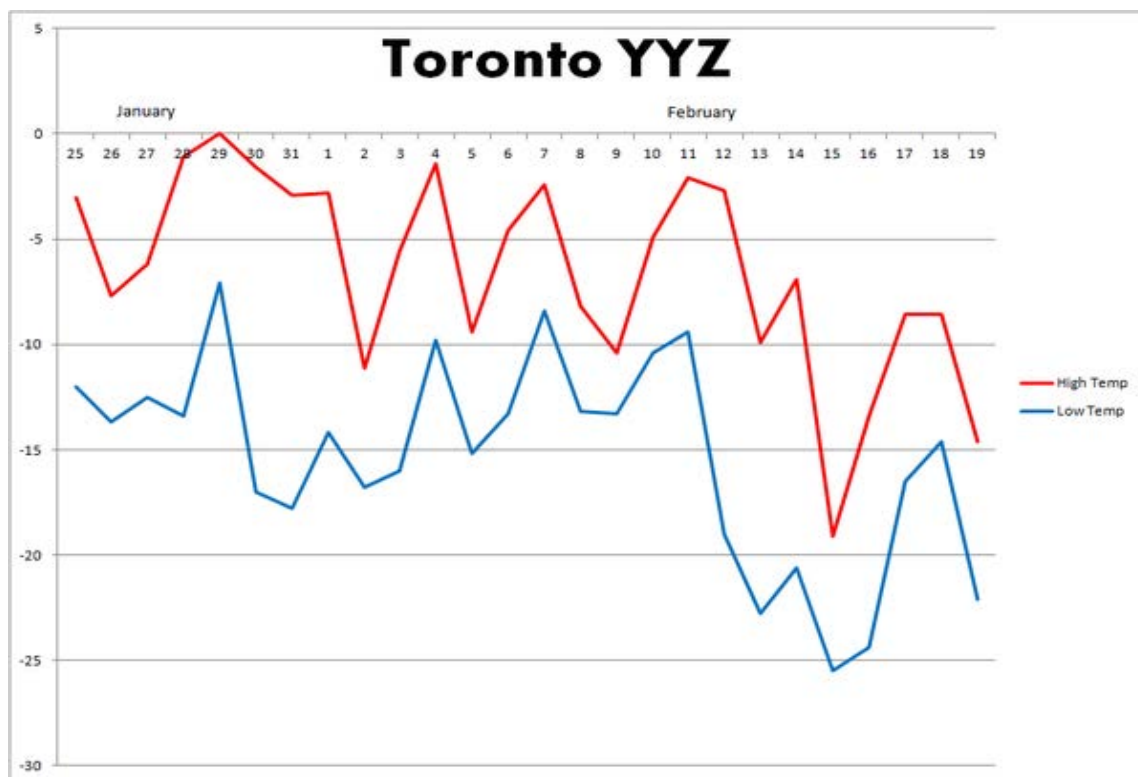
Joy Street in Boston, Feb 15th: it is doubtful citizens of this great city would agree with that name right now.

CBS News reports that the Red Sox are offering free tickets to citizens who remove snow from fire hydrants: another testament to not only how the city is sticking together, but how serious the super-charged snow situation has become.



Enormous icicles along Beacon Street created by roof snow melting, dripping and then re-freezing / Michael Dwyer / AP

The unwelcome cold hasn't been confined just to New England, either. As of press time (Feb 20), Toronto has logged 27 consecutive days below freezing (temperatures are in degrees Celsius):



“YYZ” is the airport identifier for Toronto; the rock band “Rush” used this moniker in a popular instrumental of the same name in their 1980 album “Moving Pictures”.

All of this winter woe has greatly increased the volume of insurance claims. Liberty Mutual said they have assigned “dozens of adjusters” to the Boston area with more in the wings should they be needed.

According to the *Insurance Journal*, Joe Salerno, Vice President of Claims at the Arbella Insurance group said that they are seeing a jump in both auto and homeowner claims in New England at the hands of an especially grumpy old man winter. “We are seeing a spike in the total claim volume including an increase in our auto claims as well as a significant increase in our property claim volume, driven by a high percentage of ice dam claims,” said Salerno in the report.

Three types of homeowner claims are headed upward in New England:

1. Ice dams: roof-bound snow melts on the bottom of the snowpack from warmer air in the attic heating the roof surface. The meltwater runs to the edge of the roof where it freezes in contact with the colder eaves, which are not over the attic. This creates a barrier or “dam” behind which melt-water backs up and seeps through the shingles into the attic...through the ceiling and down the walls...well you get the picture. Ice-clogged gutters also contribute to this problem.
2. Frozen pipes and water damage from burst pipes – record cold has gripped the area.
3. Roof collapses: An unknown number of structures affected, but it’s a significant amount.

Salerno said ice dam claims are counting for 40 to 50 percent of the new claim volume Arbella is seeing. “And we expect that we will continue to see ice dam claims come through the door at a high frequency as all of this snow begins to melt,” he said.

While it’s too early to place a dollar figure on the entire event, estimates for January winter-related losses in the northeast are pegged conservatively at a half billion, and February is likely to be much higher with more building (and other) damage as the snow continues to pile up...and then when it melts.

Of course, it’s not all about Boston. New York City has seen its share of cold-related issues, but the snow count there is far less.

ANATOMY OF AN ICE DAM

Illustration by Steve Kuhl, The Ice Dam Company

www.theicedamcompany.com

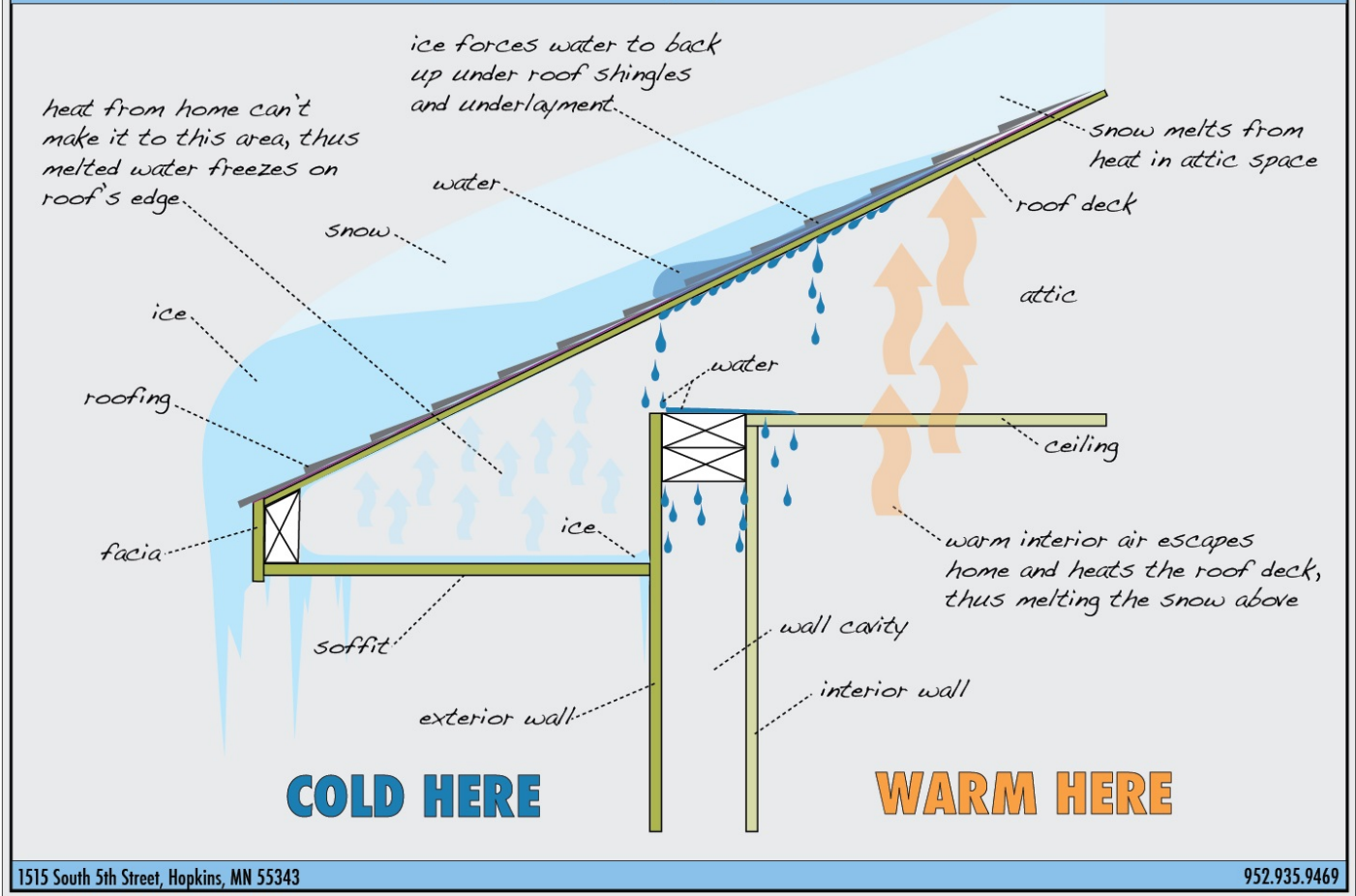


Image courtesy of Structure Tech and theicedamcompany

Deadly Ice Storm Strikes Mid-South

A major southern winter storm wound up as Valentine's Day weekend wound down, with Nashville getting a half inch of ice Feb 15-16. Louisville measured seven inches of snow; Coleman, Kentucky racked up the highest snowfall total at 18 inches, and areas near Knoxville were coated with up to $\frac{3}{4}$ " of ice. This is more than enough to cause trees branches to break and tangle up in power lines.

More than 300,000 people were left without power across a half-dozen states from Tennessee eastward along the storm track as ice-fouled trees toppled and brought down electric lines. At least nine people were killed in the storm. A sad case in Tennessee tells of a mother and son stopping to render aid on I-65 to people trapped in a flipped-over SUV. Tragically, an 18-wheeler struck and killed them. This sad statistic illustrates just how dangerous ice covered roads can be.



I-65 in Tennessee: Ice-encrusted roadways led to this accident near Nashville on Feb 18.

Interstate 40 near Nashville sported a 12-mile-long traffic jam in the wake of the ice, which began early on the 16th and rapidly grew worse as the day wore on. The storm then tracked east to coat portions of Georgia, South Carolina, and North Carolina in a half inch of ice. It also dumped up to a foot of snow in West Virginia.



Ice-laden trees in Donalds, South Carolina: the winter storm covered a huge area / Weather Underground



Looking toward the White House from a snowy Lafayette Park / USA Today

Farther east in D.C., Government workers got an extra day off as five inches of snow prompted the Feds to shutter offices for non-emergency workers Tuesday.

Tornadoes and Floods

The year 2015 got off to an active start twister-wise with a mini-outbreak on Jan 3-4 that produced about 20 tornadoes and considerable damage in Mississippi, Alabama and Georgia. Collectively, there were many millions of dollars in damage but no deaths. Since then, a series of strong cold fronts have kept the atmosphere too dry and stable for much severe weather.

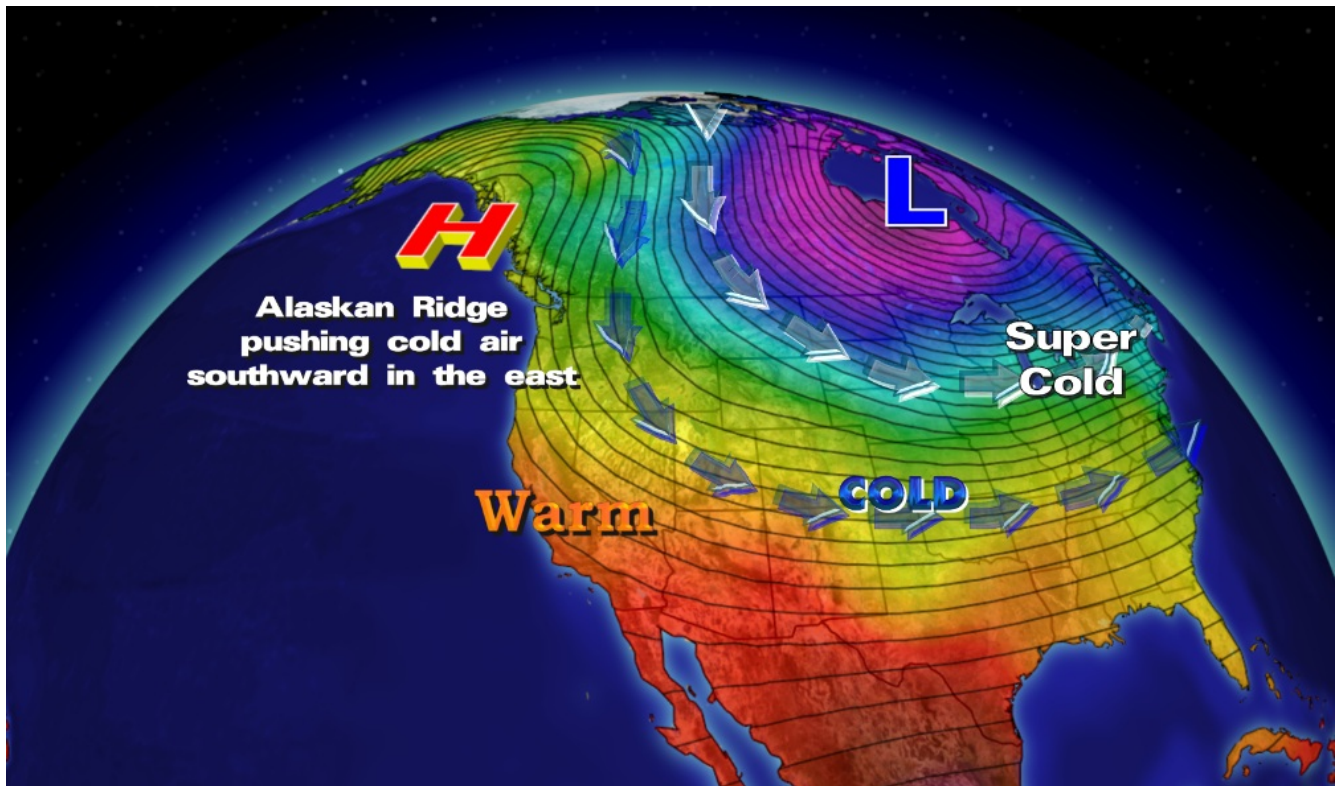
The west coast was battered by a deluge which sent the Duckabush River in western Washington State out of its banks, flooding the town of Brinnon; farther south winds were clocked at an incredible 134 miles per hour on a mountaintop near Reno, proof that this system had a lot of energy to work with.

Much of the rain falling in northern and central California was a blessing despite some flooding because it offered moisture to soils and lakes vexed by a severe multi-year drought. It was far short of what's needed, but a nice temporary ease of the dryness. Some of the rainfall totals for the first week of February included:

- 11.44 inches near Honeydew, California
- 7.28 inches in Carrville, California
- 7 inches near Sims, California
- 5.08 inches in Rocky Butte, California
- 5.08 inches near Selma, Oregon
- 4.43 inches near Brinnon, Washington
- 4 inches near Brookings, Oregon

Strong Ridge, Deep Trough

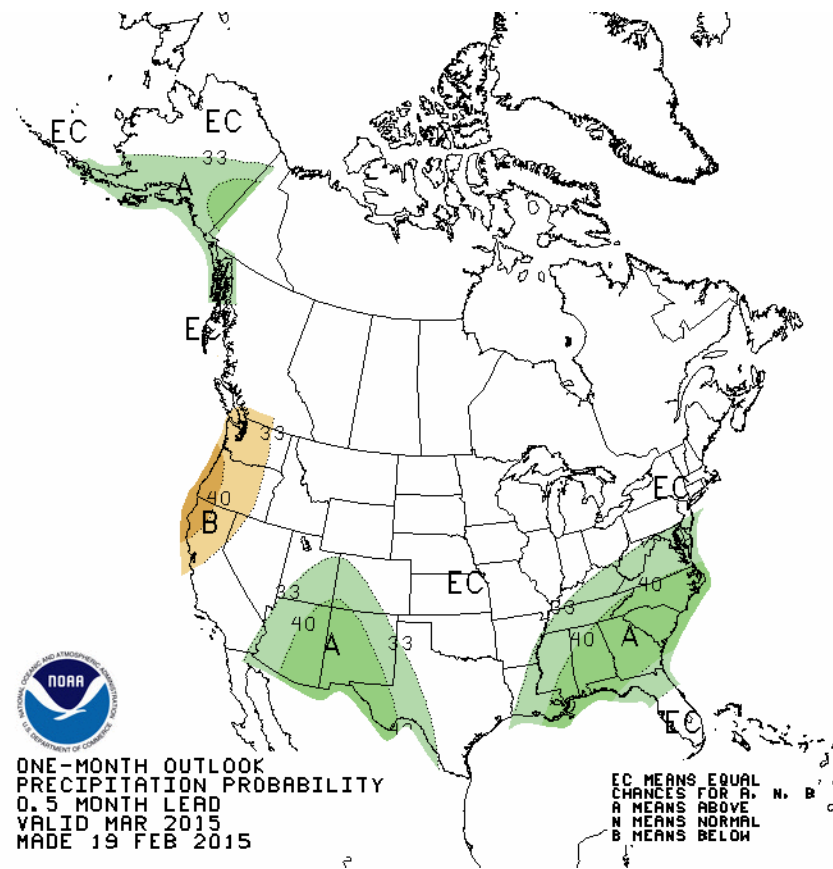
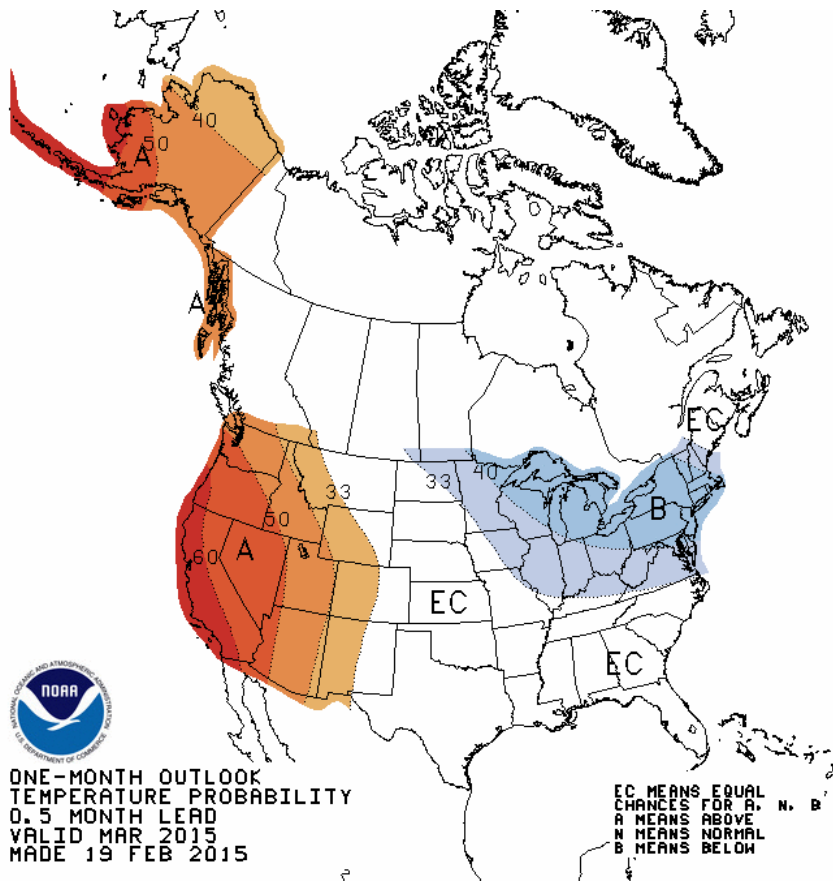
A persistent “very amplified” ridge in the west has resulted in an equally entrenched trough in the east. This is the animal that’s been responsible for the deep cold and to some degree the east coast blizzards as it steers them along and provides lift for surface lows to get stronger, and make winter that much more wicked:



We have a couple of weeks before this set-up is altered, so another southern winter storm is definitely a possibility. Stay tuned.

The weak El Nino influence may also bring in some more rain events to the west coast in March...there seems to be a good influx of tropical moisture (“The Pineapple Express”) northward into Washington, Oregon and California as of late. It will be interesting to see how the pattern change, if it takes place, affects the rain and snow there in mid to late March.

But, will this pattern change? There’s no “official” indication that it will and in fact the National Center for Environmental Prediction (NCEP) offers winter-weary folks in southern Canada and the northeastern U.S. these dreary March Outlooks:



Pattern Shift Possible Later in March

The medium-range models are in good agreement that another shot of arctic air shows up to close out February (what else is new?)...and even a second burst of cold is quite possible the first week of March....but despite the 30-day NOAA outlook shared above, there's some cause to be optimistic that the **second half** of March will settle down.

This welcome change makes sense since the Arctic Oscillation and the Pacific-North American Pattern are both trending positive, putting pressure on the overall circulation pattern to a less amplified (more west to-to-east) regime.

El Nino's "ghost" may also have an influence on the warm-up and less "humpy" jet, and I suspect a fairly active severe weather season during the second half of the month...more so than last year.

None of this promises that we won't get one more east coast snow-fest, but the odds do appear to take a backseat to "nicer" weather as we steer the cold eastward and not southward later in the month. While this outlook is far from a guarantee; I have better-than-even-money confidence, about 2 to 1, in a significant moderating trend the second half of March. Naturally, temperatures warm anyway as we enter spring, but I speak here as compared to normal, not as compared to the deep freeze of February!

Bottom Line:

Cold weather hangs on for the next 10 days to two weeks in the east and north. Mild out west.

Severe weather will be the primary concern in late March.

A stronger southern jet may bring significant rains to California mid to late March.

East coast frigid pattern breaks mid-March, who knows what snow devils may materialize before then?

The most likely adjuster hot spots in March would be with tornado/severe outbreaks in the south and Tennessee Valley, and west coast flooding, primarily the second half of the month.

This year, it's a wild weather mess as we move closer to spring.

Steve LaNore, Certified Broadcast Meteorologist
Author of *"Twister Tales: Unraveling Tornado Myths"* available on Amazon.
