

Forbes

The Anatomy Of D.C.'s Snowstorm Forecast Bust: When Good Science And Good People Go Wrong

By: Patrick Michaels – March 10, 2013

It's a fact that TV meteorologists tend to be a bit more skeptical about the upcoming end of the world than some federal climatologists. One needs only to look at the bare ground in our Nation's Capital to understand why.

Washington just witnessed the biggest busting of a major snow forecast in a long, long time; in fact, back to November 11, 1987, when double digits fell out of a sky that was supposed to drop maybe an inch. In the recent case, what would have been a record-or-near-record snow was forecast by virtually everyone and for very good reasons.

It's important to define a busted forecast. That's not one where the forecaster changes his or her mind based upon new information prior to an event. To qualify as a disastrous forecast, a major event has to be predicted and held on to even as it fails to materialize.

Big busts are rare because our computer models are so darned good, lead by the flashy Euro, run twice a day out of the United Kingdom, which has developed a reputation for nailing disruptive Atlantic Coast cyclones days ahead of time. One of those was named Sandy, as it transitioned from a large but not particularly intense hurricane into a large and particularly vicious coastal storm. The U.S. models, especially the newer SREF (Short Range Ensemble Forecast) aren't too shabby either, especially compared to what was online during the 1987 bust.

The recent disaster also occurred on the watch of a collection of some of the world's best forecasters, who, for a variety of reasons, are clustered in Washington.

Led by our modern computer output, all of their forecasts failed. The list includes Bob Ryan, a past-president of the 14,000-strong American Meteorological Society, who works for the local ABC outlet. Also included would be Jason Samenow who runs the very popular www.capitalweather.com at the *Washington Post*, and enjoys cult status in DC. When he walked into my classroom at UVA, I felt like Roy Hobbs' ("The Natural") high school coach must have.

The new head of the National Weather Service is the legendary Louis Uccellini. If young Samenow is The Natural, Louis is the Godfather, and his specialty is—wait for it—the Mid-Atlantic snowstorm. In fact, he and Paul Kocin literally wrote the book on them.

I'm pretty sure if Uccellini thought his troops were making a mistake on what was going to be a very public storm, he'd probably call someone and have a chat.

They had every reason to hold onto the snow forecast. Precipitation was moving in from the Southwest. As forecast, what began as rain in central Virginia transitioned over to snow in a couple of hours; even a bit earlier than it was supposed to. Charlottesville, about 80 miles southwest of DC, eventually racked up over 14 inches. The central Shenandoah Valley, thirty miles west of there, hit 20.

At 11:30pm on March 5, it began to rain in Washington, D.C. itself. Within a mere 20 minutes, it switched over to snow as the temperature began to drop through the upper 30s. The ground began to whiten. As the precipitation intensified and the low pressure system became more intense, basic physics said more cooling was on the way. Let the Big One begin!

Congratulatory emails went flying, and beer cans popped forth. Most forecasters went to bed expecting to wake to a winter wonderland.

My thermometer showed 35° and dropping. I set it to alarm at 37°, on the crazy, impossible, off-chance that something would go terribly awry. It went off two hours later, signaling that the bust had begun.

What happened is hardly an indictment, but rather a statement of the human condition. Our "best science" can be wrong.

So, in summary, not only were the best models and the best forecasters largely in agreement (there was one exception: the sophisticated Euro was somehow missing the heaps of snow that were already piling up down in Virginia), *allevidence* indicated that the snowstorm was unfolding as planned. See any parallels with global warming? Sophisticated climate models and highly trained scientists, and a smart warming that began around 1975.

Oh, the lack of any warming for seventeen years now? My climate alarm just went off.