

## As Earth Cools, Data Centers Busy Re-inventing the Past

*By Joseph D'Aleo, CCM*

Tom Peterson of NCDC in the next version of the Bulletin of the AMS will be co-authoring a paper [Study: Global cooling a 1970s myth](#). In it he tries to downplay the cooling and the coverage and hype it received.

The book from 1977 “The Weather Conspiracy” has a special CIA report that states “The western world's leading climatologists have confirmed reports of a detrimental global climatic change. Leaders in Climatology and economics are in agreement that a climate change is taking place and it has already caused major economic problems throughout the world.” James Hansen himself was part of a NASA research effort that predicted cooling. On July 9, 1971, the Washington Post published a story headlined “U.S. Scientist Sees New Ice Age Coming.” It told of a prediction by NASA and Columbia University scientist S.I. Rasool. The culprit: man’s use of fossil fuels. The Post reported that Rasool, writing in Science, argued that in “the next 50 years” fine dust that humans discharge into the atmosphere by burning fossil fuel will screen out so much of the sun’s rays that the Earth’s average temperature could fall by six degrees. Sustained emissions over five to 10 years, Rasool claimed, “could be sufficient to trigger an ice age.” Aiding Rasool’s research, the Post reported, was a “computer program developed by Dr. James Hansen”, who was, according to his resume, a Columbia University research associate at the time.

It grew so cold in the late 1970s, the city of Winooski, Vermont even considered putting a dome over the city to protect from the cold. See the Time Magazine story in that [here](#).

Having been in college and grad school in the 60s and early 70s, I will acknowledge the considerable talk about the global cooling at the time attributed by some to aerosols (the human volcano) but there was also much discussion about other possible climate factors like greenhouse warming and changes due to solar cycles. Probably the majority of scientists, like today were in the middle ground on this issue acknowledging the cooling but thinking of it as a phase in normal cyclical changes of uncertain origin. The more vocal scientists with the most alarmist theories like today got the most media attention.

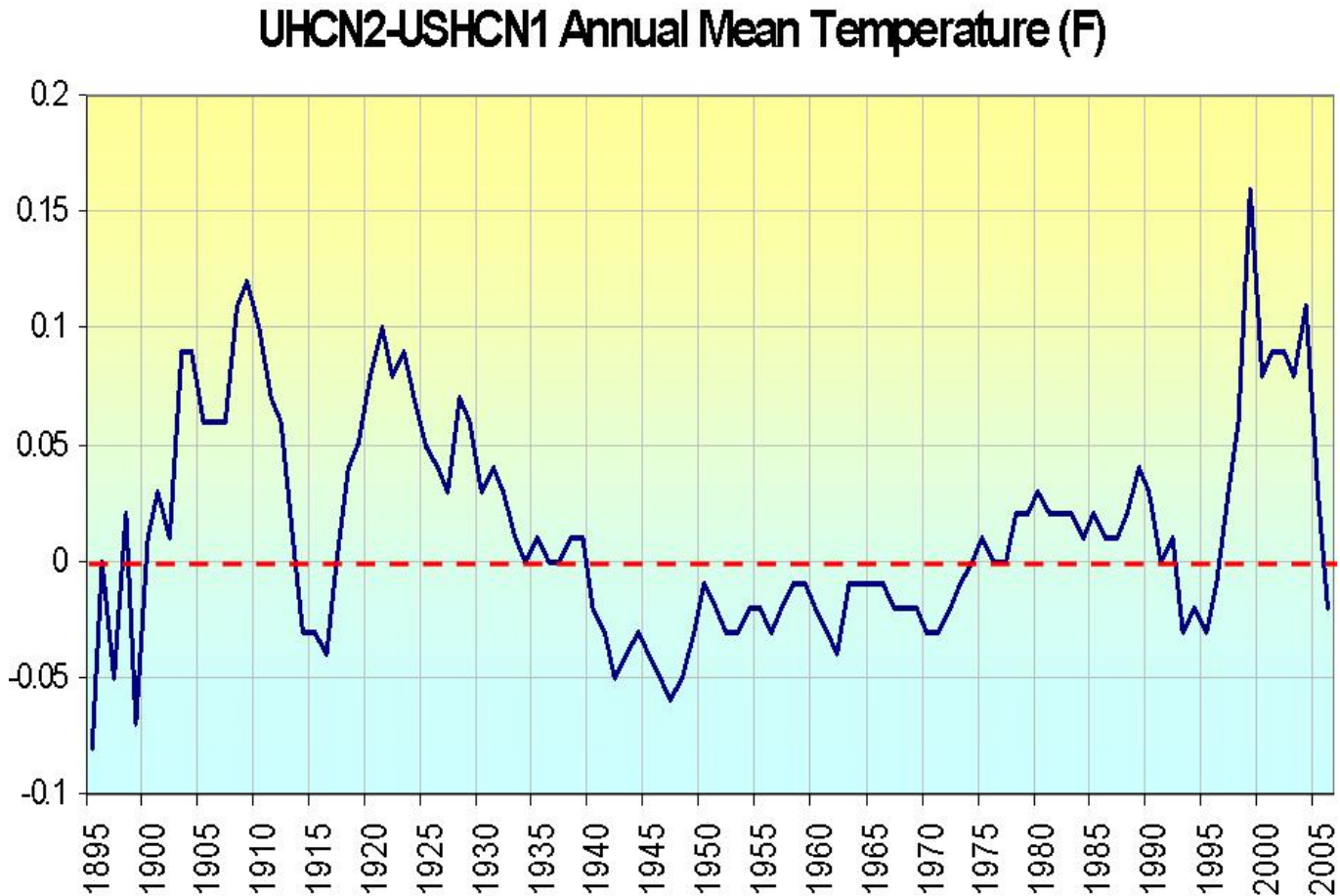
Why the efforts to downplay the cooling. Like the Medieval warm period and Little Ice Age, the mid-20<sup>th</sup> century cold period has been a thorn in the side of alarmists because they implied natural factors at play. And remember a lot of the cooling came during the post World War II boom.

Mann did his best to do away with the warm period and his band of merry men are still trying to find proof it didn’t exist despite the steady stream of peer review papers that suggest it did and was not confined to Europe but was worldwide. CO2Science has done an excellent job collating those studies [here](#) while World Climate Report has done due diligence finding evidence not only that the Little Ice Age was real but was global (see latest [here](#)).

### ***DATA CENTERS CONSISTENTLY ADJUST OLD DATA***

In 2007, NCDC announced their latest “upgrade” to their USHCN data base that eliminates the Karl (1988) urban adjustment in the first version in favor of a change point algorithm that is supposed to detect changes in siting and urbanization. It is totally unclear how this method which looks for inflection points (sudden changes) in data trends would be able to detect and adjust for a town or city which slowly grows to expand its heat island to the airport often built on the outskirts of a town.

Their new algorithms warmed the early 1900s, cooled slightly the middle 1900s and warmed the last decade. The difference between the old and new versions is shown below.



The result of this is that the peak in 2000 is higher relative to the peak in 1930 in the initial analysis. The changes made the US data look more like the global data with less of a dip down in the mid century and more recent warming.

A little while back, NASA, announced that 2007 was the second warmest year on record

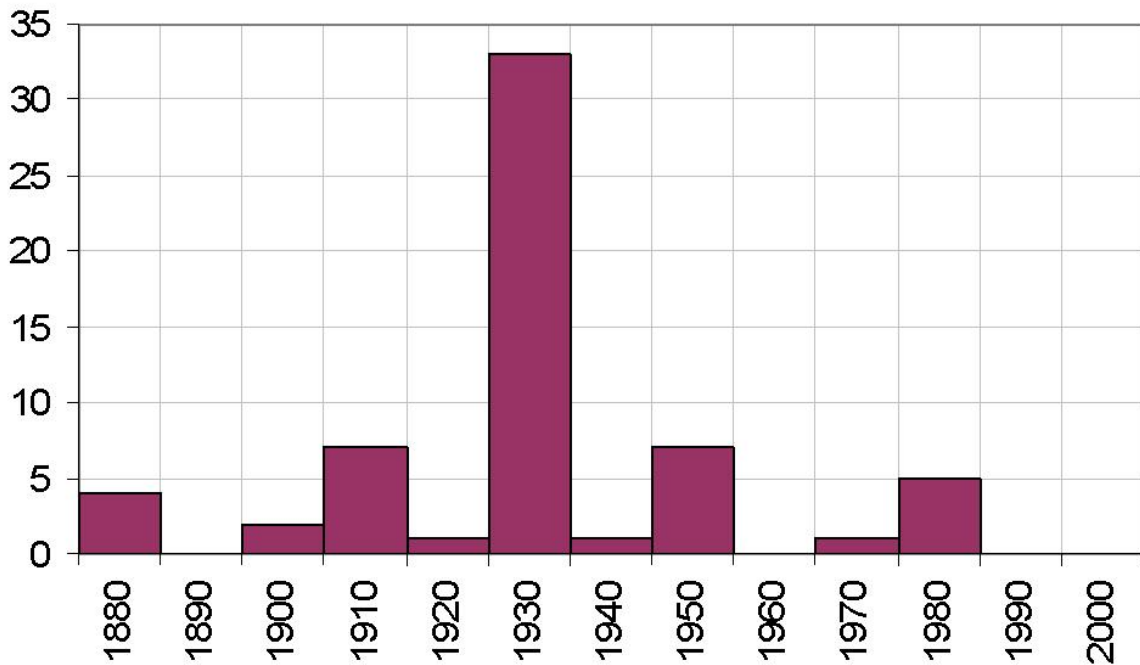
tied with 1998 based on alterations to their adjustments (a very regular process it appears based on attempted analyses by Steve McIntyre) and their increased emphasis on polar regions compared to other data sets. Other data centers and the satellite data sets suggested it ranked much lower.

### ***DENYING THE URBAN HEAT ISLAND IMPORTANCE***

The national centers with their GISS, GHCN and CRU data bases do little to adjust for urbanization and local factors. The IPCC has bought into this despite the fact their have been numerous peer-reviewed papers that suggested contamination by urbanization, land use changes, station dropout (2/3rds of the world's station's mostly rural), missing data (again smaller stations), changes in siting, poor siting (a bigger problem than anyone imagined based on the good work of Anthony Watts and his volunteers) may be responsible for 30-50% of the warming of the last century.

If that is true, then the observations from many locations showing most of the daily warm records were set back in the 1930s era suggest the current cyclical warming is less significant than that in the last warm cycle peak. See this history of record high temperatures for Des Moines, IA typical of the raw data sets.

### **Daily Record Highs in June and July in Des Moines, Iowa by Decade**



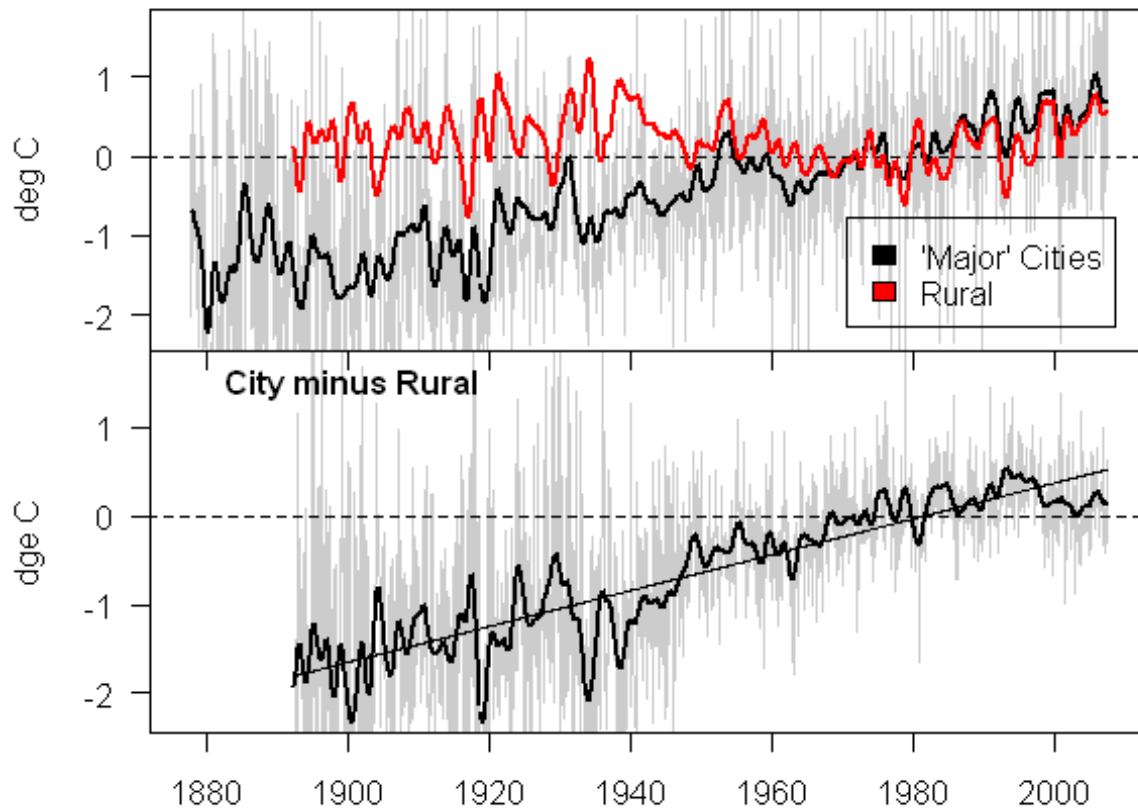
### ***DEEMPHASIZING URBAN BASED ON FLAWED STUDIES***

[Tom Peterson's 2003 work](#) is responsible for most of the data centers downplaying urbanization. This study concluded: "*Contrary to generally accepted wisdom, no statistically significant impact of urbanization could be found in annual temperatures.*" It along with papers by Hadley's [David Parker in 2004](#) and 2006, which stated "*globally, temperatures over land have risen as much on windy nights as on calm nights, indicating that the observed overall warming is not a consequence of urban development*". were highly influential in the IPCC's attribution analysis and modeling in AR4 and the decisions on how to handle urban data by NCDC (GHCN, USHCN), NASA (GISS) and Hadley CRU).

In this [analysis](#) in August 2007 by Steve McIntyre on Climate Audit, he accessed and worked with the data Peterson used in his analysis to show how urban differs markedly from rural data and is undoubtedly contaminating attempts to determine climate trends.

"In the figure below, I've calculated the average unadjusted temperature for actual cities, rather than places like Snoqualmie Falls. My criterion for inclusion in this calculation is whether the city has a major league sports franchise and includes a variety of mostly small market cities: Milwaukee, Sacramento, Orlando, San Antonio, Cincinnati, San Diego, Seattle, Salt Lake City, New Orleans, plus a couple of larger places: Detroit, Philadelphia, Dallas. To my knowledge, no sports franchises are considering re-location or expansion to Snoqualmie Falls, Hankinson, Pine Bluff or the various other supposedly "urban" sites that dilute the Peterson network.

In this data set that supposedly shows the following "Contrary to generally accepted wisdom, no statistically significant impact of urbanization could be found in annual temperatures", actual cities have a very substantial trend of **over 2 deg C per century** relative to the rural network - and this assumes that there are no problems with rural network - something that is obviously not true since there are undoubtedly microsite and other problems. At the very end of the graphic, the change levels off - I wonder if that might indicate increased settlement effects at rural sites.



Roger Pielke Sr. has also taken Peterson and Parker to task in several posts including [this one](#) in which they found relative to Parker's findings, the height of the measurements at night was critical to the accurate assessment of minimum temperatures, something ignored in the study. Roger et al conclude: *This means that a significant warm bias exists in the 2007 IPCC Report on the trends of the global average radiative forcing, since they base their estimate on a surface air temperature trend that includes minimum temperatures over land. This bias, which occurs whenever the nighttime surface boundary layer is stably stratified over land and the winds are light is, therefore, very significant at high latitudes in the winter, where much of the warming is reported to have occurred. This error in the IPCC construction does not mean that no warming has occurred, but it does mean that they have significantly overstated global warming in their report.*

Roger also in [this post](#) challenged the Brown et al (2008) and Peterson et.al. (2008) papers that claimed to find an increase in warm records since 1950. Roger showed how this was the case because of they have both ignored the peer reviewed literature that has identified major problems with the use of near surface air temperatures to diagnose global warming! Roger notes: *Since Brown et al and Peterson et al are aware of conflicting studies like Pielke et al (2007) Lin (2007), and Hale (2006) (peer reviewed papers were published earlier by the same professional society!), their ignoring them, rather than*

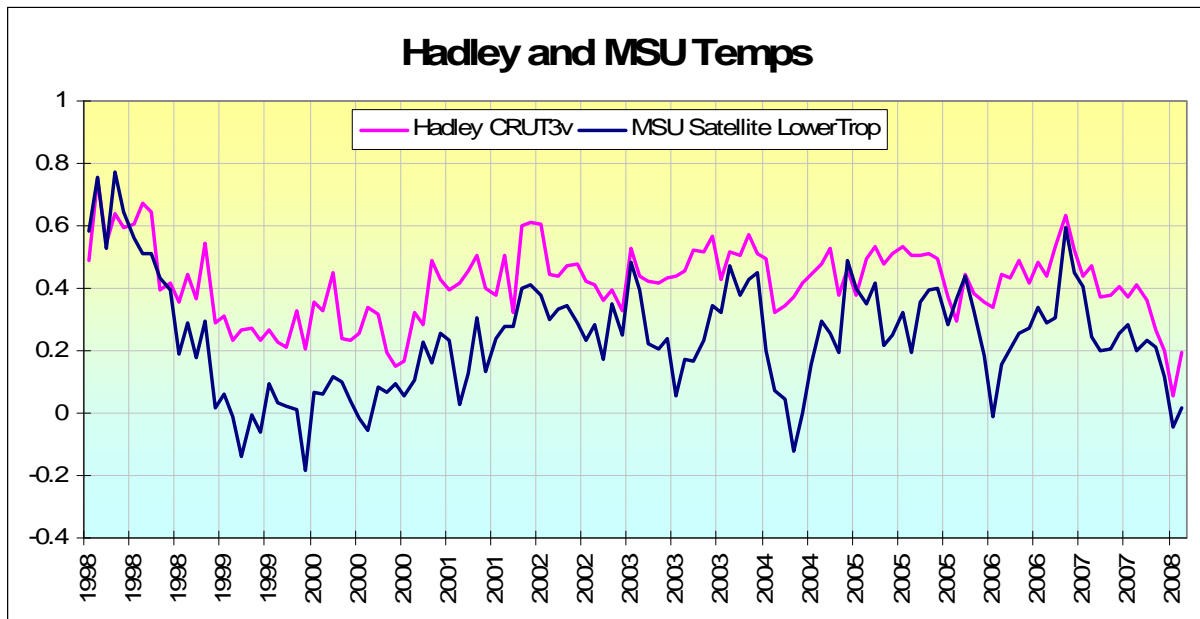
reporting that work and seeking to refute it (which is after all the scientific method), is a clear example of using science as advocates to promote a particular perspective on the issue of climate change. This is unfortunate, as these authors have the talent and scientific capabilities to assess the major issues we have raised. Instead they chose to ignore these issues.

These papers should, therefore, be recognized for the biased analyses that they are and the results dismissed until the authors satisfactorily address the several issues with using surface land surface temperature data to assess long term trends. This includes photographs of the observing sites for the temperature data they used, since, as has been clearly documented, the written descriptions of most of the sites are grossly inadequate.

It is unfortunate we do not have satellite data that spans more of the past than it does to demonstrate these biases (the current data set starts in 1979).

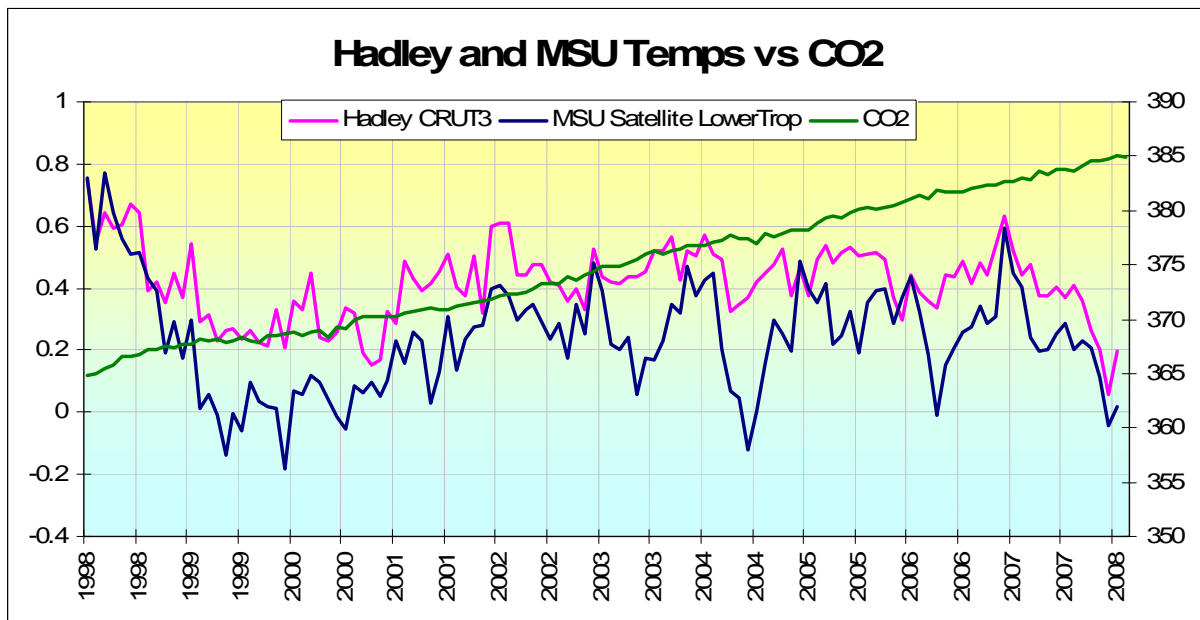
### **THE RECENT COOLING**

The recent studies and the media continues to ignore evidence that warming has slowed, stopped and even recently reversed.



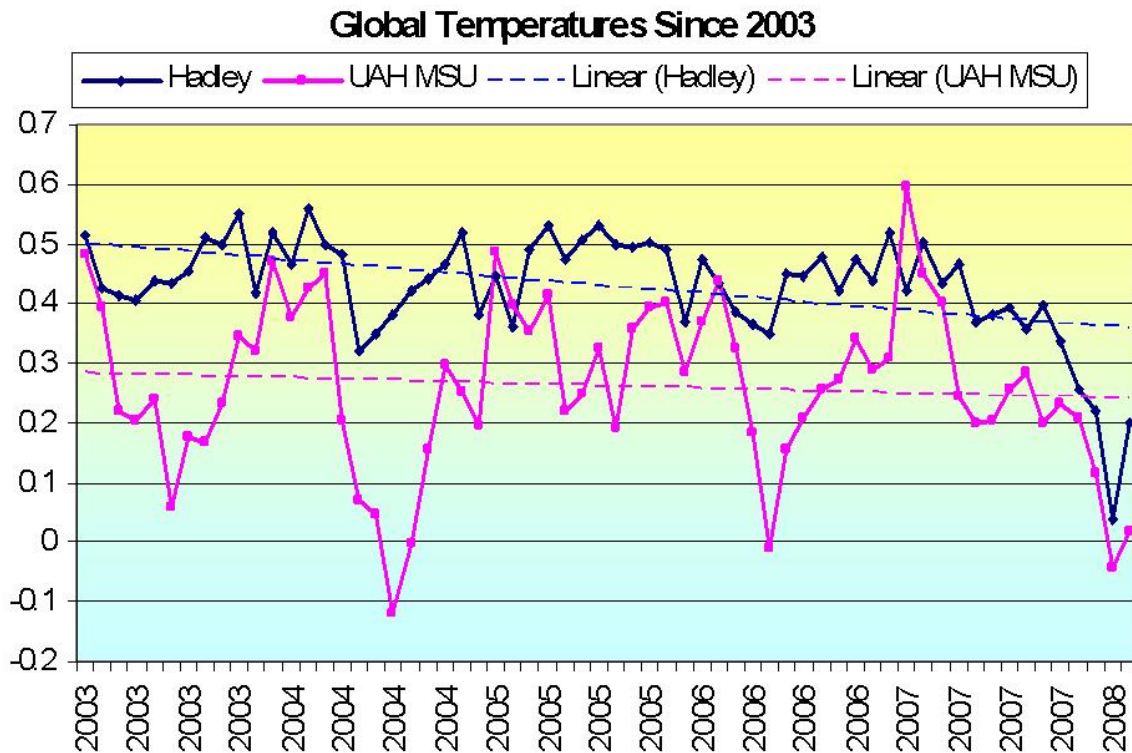
Temperatures have not risen since 1998 according to both Hadley and MSU UAH monthly data.

This is true even as CO2 has increased 5.5%. The correlation of CO2 monthly data over the last decade is virtually non-existent with the Hadley (r-squared of 0.001) and with UAH (0.005).



Ocean heat content also shows this lack of warming. Roger Pielke Sr. has long argued that ocean heat content was a better measure of climate change. See this [paper](#).

Josh Willis at NASA's Jet Propulsion Laboratory agrees with Roger the oceans are what really matter when it comes to global warming. Willis has been studying the ocean with a fleet of robotic instruments called the Argo system. The buoys can dive 3,000 feet down and measure ocean temperature. Since the system was fully deployed in 2003, it has recorded no warming of the global oceans. There has been a very slight cooling, but not anything really significant," [Willis tells NPR](#). So the buildup of heat on Earth may be on a brief hiatus. The findings actually agree with the land and ocean global data bases from Hadley and UAH MSU. See the recent follow-up exchange between Roger and Josh on Climate Science [here](#).



Satellite and buoy data will be invaluable in quality controlling upcoming changes in temperatures based in part on station data. Satellite and buoys will ensure that if the globe continues to cool, it won't be so easily adjusted away. Instead of trying to readjust old data, NCDC (and the rest of the world's meteorological centers) should be focused on trying to get their act together with regards to siting of weather instruments used to measure climate change. With all of the problems they have, it is hard to imagine we can use them to detect changes the order of a few tenths of a degree with any precision or confidence to make important and very costly policy decisions.

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