

Solution To Global Warming

By Dr. Hugh H. Eye in the February 2009 Journal of Climate Conundrums

In our review of the data, it appears we would get 40 times more temperature reduction if we de-urbanize instead of de-carbonize. The solution to global warming is one that will be embraced by most of my environmental 1960s comrades, bulldoze down all cities, plant grass and trees and relocate everyone to rural areas.

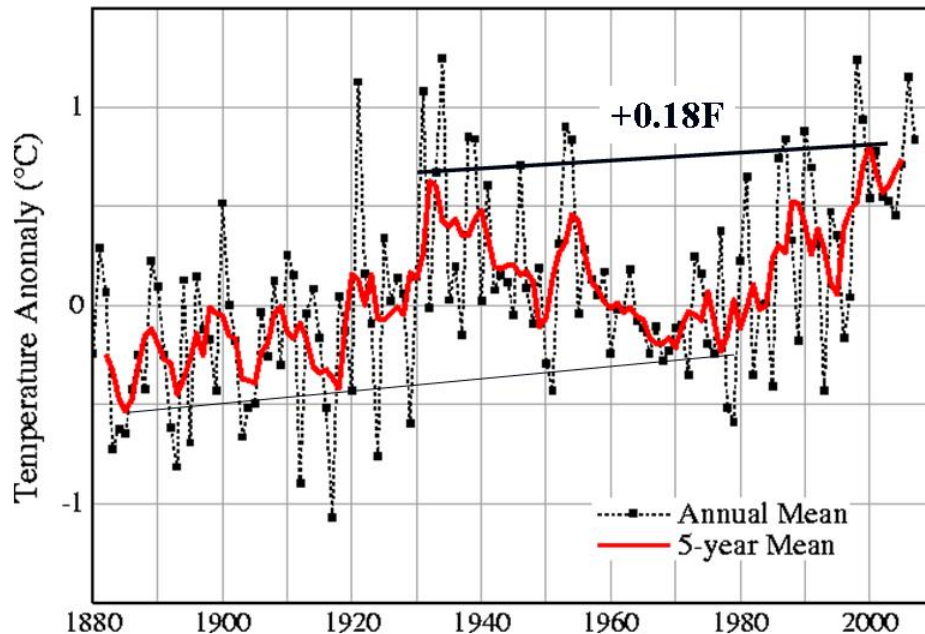


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URBANIZATION AND LAND USE CHANGES DWARF CO2 WARMING

See this NASA GISS US temperature plot which shows a warming of just 0.18F since 1930. This data set is adjusted for urbanization. The stations though are subject to poor siting which induces an artificial warming. In fact Anthony Watts has found only 11% of the 841 US climate stations surveyed to data meet the government's own standards for siting in all cases introducing a localized warming. Assuming many of these issues (constructing buildings near sensors, allowing vegetation to grow, placing air conditioner exhausts near sensors, paving roads near sensors) occurred in recent years, one would assume an apparent warming would result, so even this small warming is likely exaggerated.

NASA GISS US DATA



Runnalls and Oke (2006) concluded that “Gradual changes in the immediate environment over time, such as vegetation growth, or encroachment by built features such as paths, roads, runways, fences, parking lots, and buildings into the vicinity of the instrument site typically lead to trends in the series. Distinct régime transitions can be caused by seemingly minor instrument relocations (such as from one side of the airport to another, or even within the same instrument enclosure) or due to vegetation clearance.

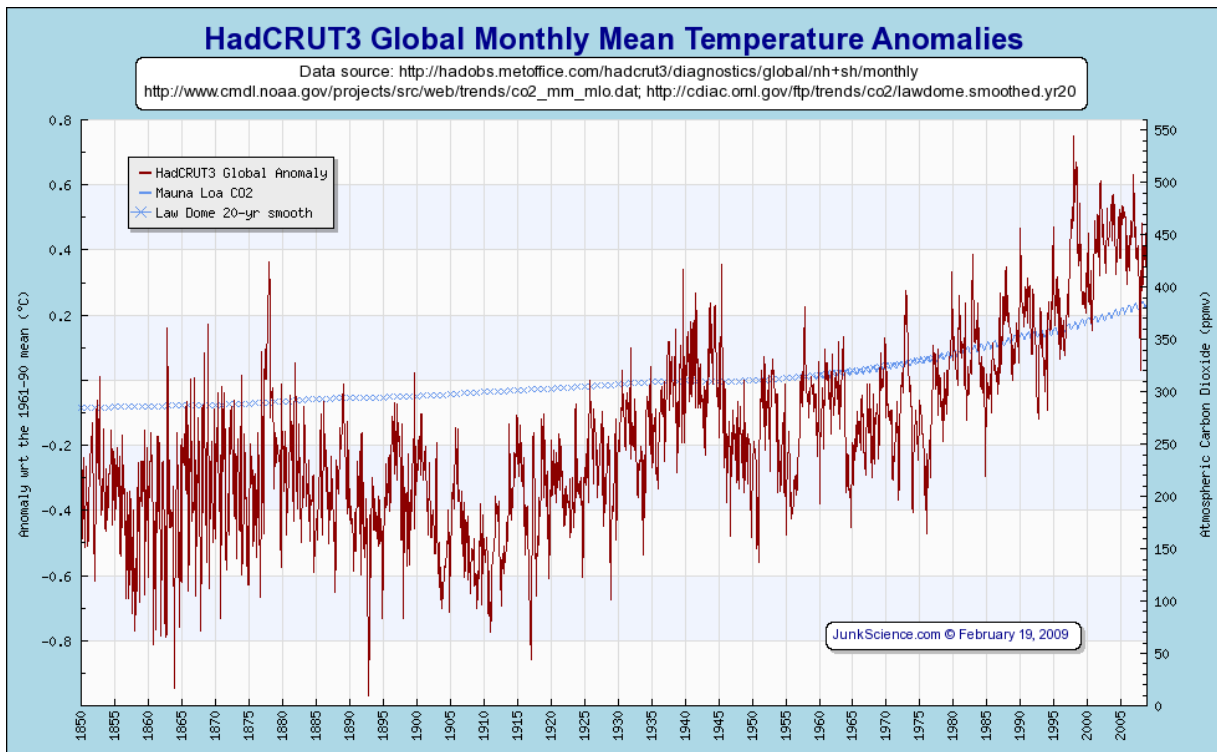
Oke (1973) and Hoyt (2002) have shown that a town of 1000 could see a warming of 2.2°C, (3.6F) especially in winter. Hinkel *et al* (2003) showed that even the village of Barrow, Alaska, with a population of 4600, there is a measurable warming of 2.2°C (3.96F) in winter over surrounding rural areas.

Oke developed a formula for the warming that is tied to population. The UHI (in °C) increases according to the formula

$$UHI = 0.73 \log_{10} \text{POP}$$

where *pop* denotes population. This means that a village with a population of 10 has a warm bias of 0.73°C (1.3F), a village with 100 has a warm bias of 1.46°C (2.6F), a town with a population of 1000 people has a warm bias of 2.2°C (3.6F), and a large city with a million people has a warm bias of 4.4°C (7.9F).

The Hadley global data set shows more warming because it has NO ADJUSTMENT for urbanization and suffers from the same poor station siting issues. It shows about a 0.45F warming since 1930.



Ross McKittrick and Patrick Michaels (2007) showed a strong correlation between urbanization indicators and the “urban adjusted” temperatures, indicating that the adjustments are inadequate. Their conclusion was: "Fully correcting the surface temperature data for 'non-climatic effects reduce the estimated 1980-2002 global average temperature trend over land by about half.'" Over half a dozen other peer-reviewed papers agree with this assessment that the global data bases are significantly contaminated by urban heat island effect.

The 50% contamination means that even if we ignore the bad siting, the warming in the global data base would be around 0.2F, in close agreement with the US data. Again due to the siting contamination, this again is likely exaggerated. Still there are no assurances that these changes if real are not natural, for example related to the solar grand maximum in the late 20th century.

Whatsmore in looking at the trends in both data sets we see cooling trends in the decades from the 1940s to the 1970s and after 2000 and warming from 1979 to 1998 (the 1980s and 1990s). That means in 5 of the 7 decades since the post warm boom, temperatures have fallen while CO2 rose, with a rise coincident with CO2 only from 1979-1998, not exactly a ringing endorsement for man made carbon dioxide caused climate change.

But let's assume it does relate to CO2. Given that a large city of 1 million has an artificial warming of 4.4C (7.9F), we get about 40 times more bang from the buck from deurbanization than decarbonization.

What a perfect way to spend the money in the stimulus bill for green jobs. Reid and Pelosi please take note.

Hugh H. Eye stands for UHI, the Urban Heat Island, of course. He doesn't exist but UHI certainly does.