

So, where's the HOPE in "Climate Change"?

"Climate change is the most consequential, urgent, sweeping collection of challenges we face."

-- Hillary Clinton

"Confronting climate change is, in the long run, one of the greatest challenges that we face."

-- John Kerry

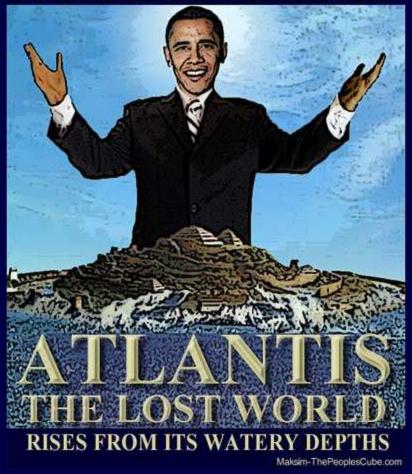
"Climate change represents one of the major challenges of the 21st century"

-- Barack Obama

So they all have the same speech therapist.
But, what can these guys HOPE to CHANGE?

Can he lower the seas?

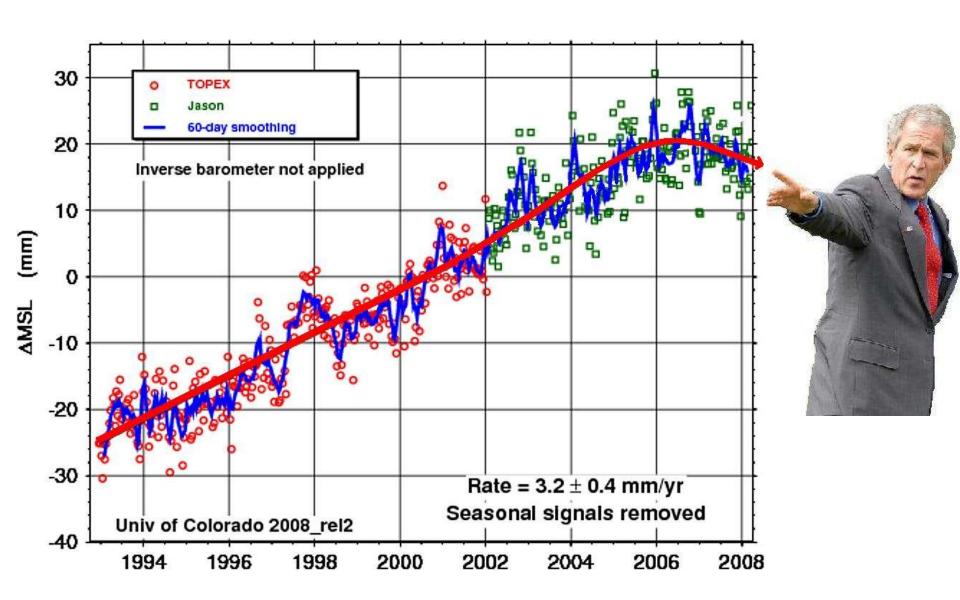
OBAMA COMMANDS SEA LEVEL TO LOWER



"I am absolutely certain that generations from now, we will be able to look back and tell our children that this was the moment when the rise of the oceans began to slow and our planet began to heal."

- Barack Obama, June 3, 2008

No need to. Been done ...



Since 2000 AD ...
Temperatures have fallen
US CO₂ emissions have diminished
Sea level rise has slowed
The planet began to heal

Thanks to President George W. Bush, who did



NOTHING

(he was busy with more important stuff)

Another case where doing nothing is the best policy

Climate Dysfunction: The Facts of Global Warming. Political Science or Science Fiction?

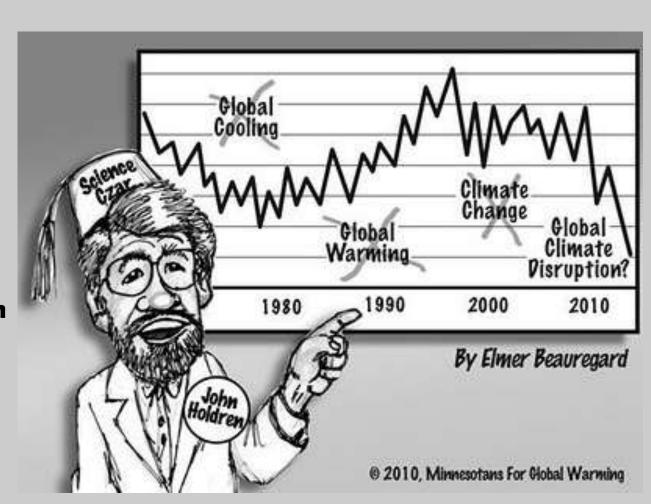
Dr. Richard A. Keen

University of Colorado, Boulder (Emeritus/Ret.)

Weather observer,
Coal Creek Canyon, CO

richard2keen@gmail.com

Pre-dawn breakfast Greeley, CO September 2014



My thoughts on climate are tainted by my background as a...

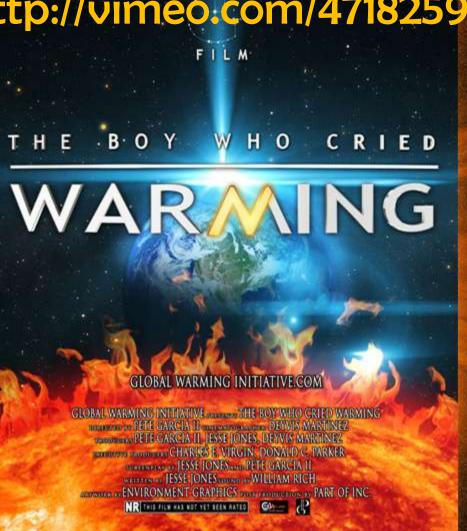
Climate researcher Astronomer **Reporter & Author** Teacher Photographer **Mountaineer & Glaciologist** Snow shoveler Storm chaser **Army Met guy** Weather observer Weather "historian" **Talking Head IPCC WG1 AR5 Expert Reviewer** Taxpayer

I've also done some climate modeling, but that was in my reckless youth.

I write books, too. About weather.

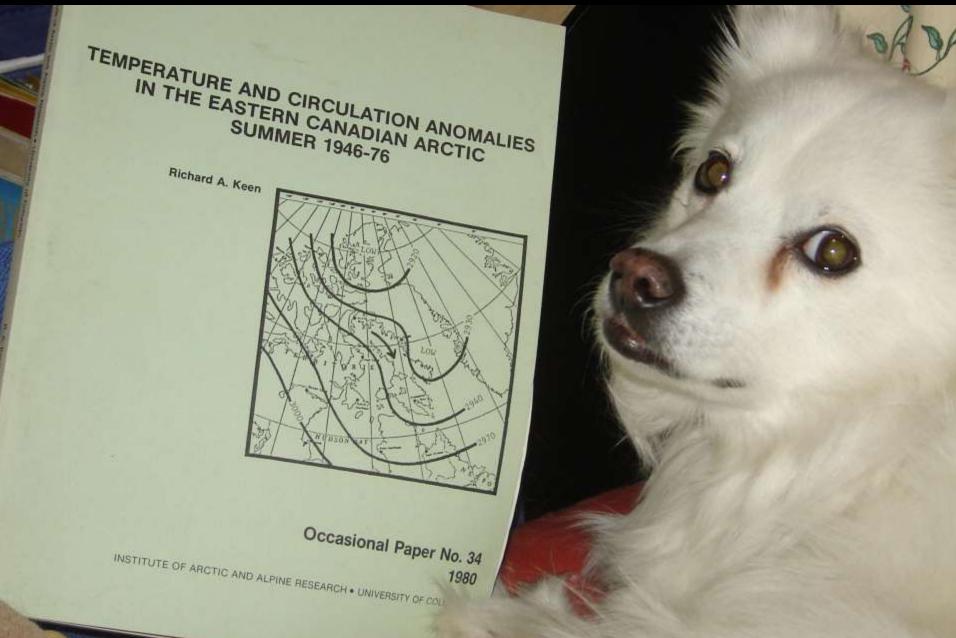


Talking Head credit: The boy who cried warming http://vimeo.com/47182591

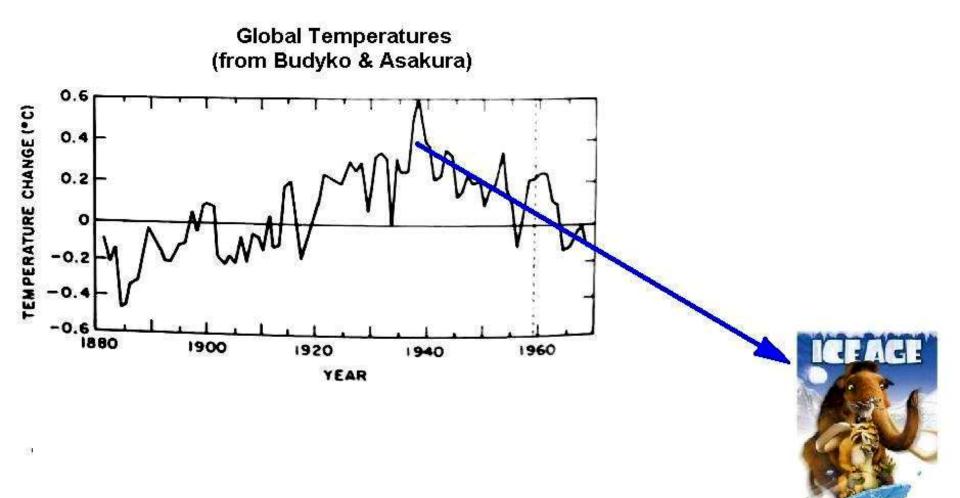


And a PhD thesis about climate change in the Arctic.

Conclusion: jet stream winds and storm tracks are the major factors.



When I wrote that Ph.D. thesis, a new ice age seemed a possibility (by some scientists, including current "warmers" and the media).



Of course, the ice age was going to be caused by humans.

30 December 1976

737



The ice age did not occur, so we still have Chicago and Moscow.

Now it's Global Warming, a.k.a. "Climate change" etc. we're looking for.



The Art of Detection: How do you measure Global Warming?

Dr. Richard Keen
U. of Colorado, Emeritus

richard2keen@gmail.com richard.keen@colorado.edu

Weather watcher since
Hurricane Hazel 1954
NWS co-op observer 30+ years
Content not approved by any
funding agency, big oil, bigger
academia, biggest government, my
congress-person (CO-2), my cat, etc.

What are we trying to measure?
Let's grab 10,000 molecules of air.
Since 1800, humans have added
ONE (1) CO₂ molecule.
Radiative greenhouse theory gives
Anthropogenic Global Warming AGW of

0.2°C

compared to 33°C existing greenhouse effect, due mostly to $100~\text{H}_2\text{O}$ molecules. Some say it's larger due to H_2O feedbacks.

Can we measure 0.2°C AGW*?

Millions of thermometer readings at thousands of weather stations can be used to seek AGW

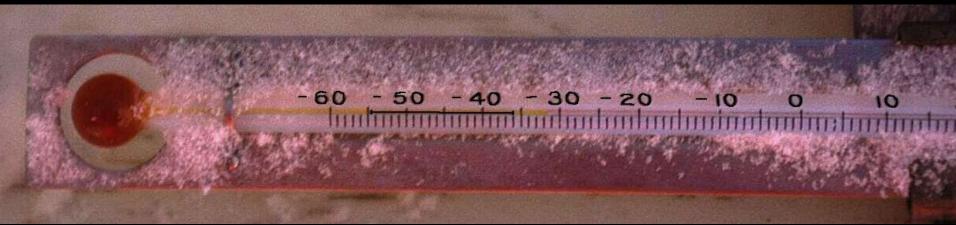
AGW is NOT measured by polar bear parts, glaciers, hurricanes, sinking isles of guano, federal grants, mutant frogs, or Obama telling us it's real.

* AGW = Anthropogenic Global Warming

What are the limitations of weather station thermometer readings?

- Thermometer accuracy
 Siting & exposure
- 3. Adjustments/homogenization 4. Poor coverage of the globe

1. Accuracy:

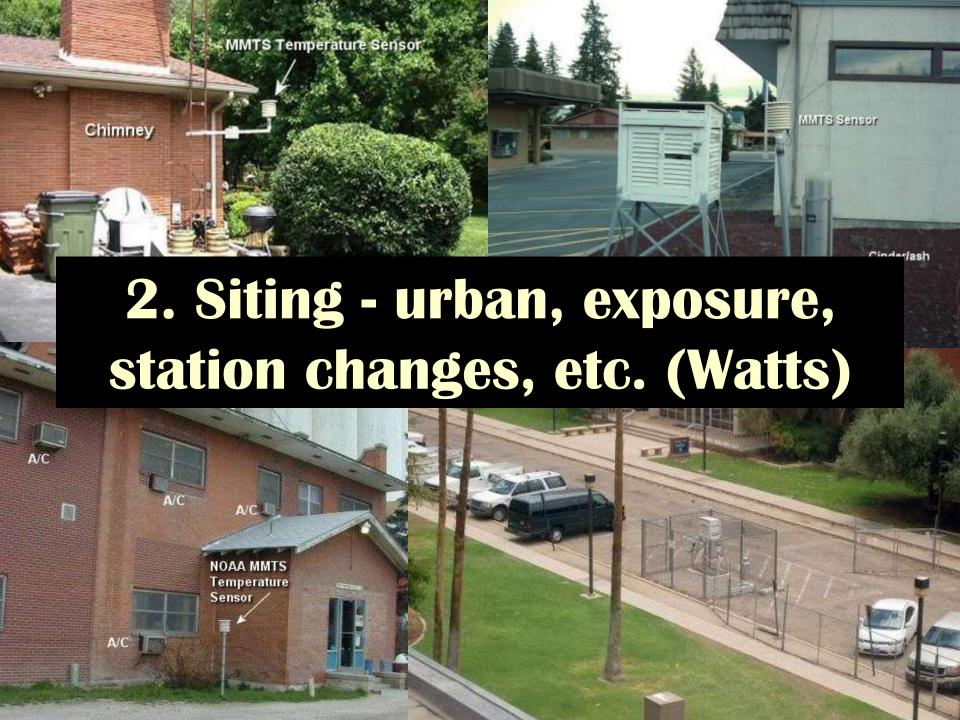


Meteorological thermometers are calibrated and scaled to ± 1 or 0.5° C

Shelter color & maintenance can affect readings, too.

(Sutter's Mill, CA – closed)



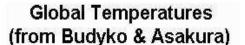


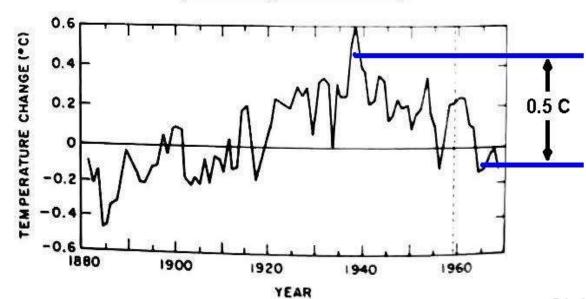
3. Adjustments and homogenization - until data fits theory

"It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts."

—Sherlock Holmes (Arthur Conan Doyle)







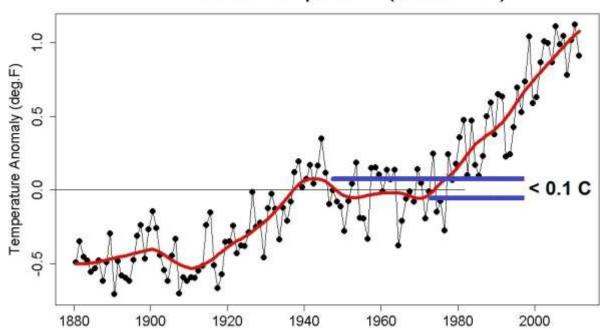
The Dust Bowl years.

Version 1975 (top)

Version 2012 (bottom)

Global Temperature (NASA 2012)

Inconvenient events:
1960's "Micro Ice Age"
1930's "Dust Bowl Max"
are reduced to minor
blips.

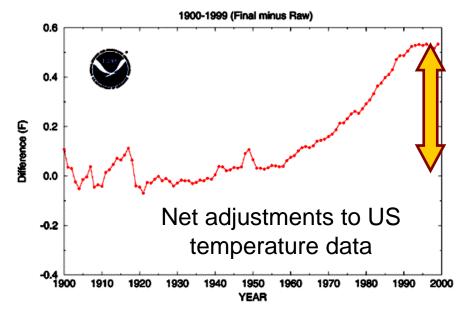


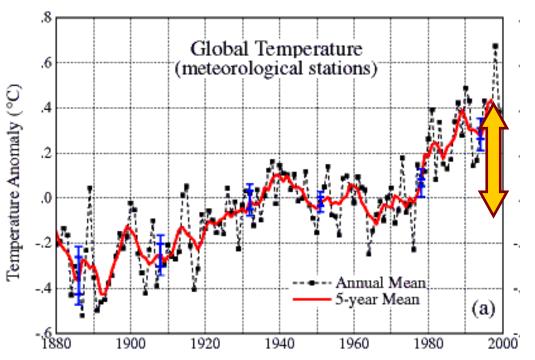
DIFFERENCE BETWEEN RAW AND FINAL USHCN DATA SETS

How do they rewrite climate history?

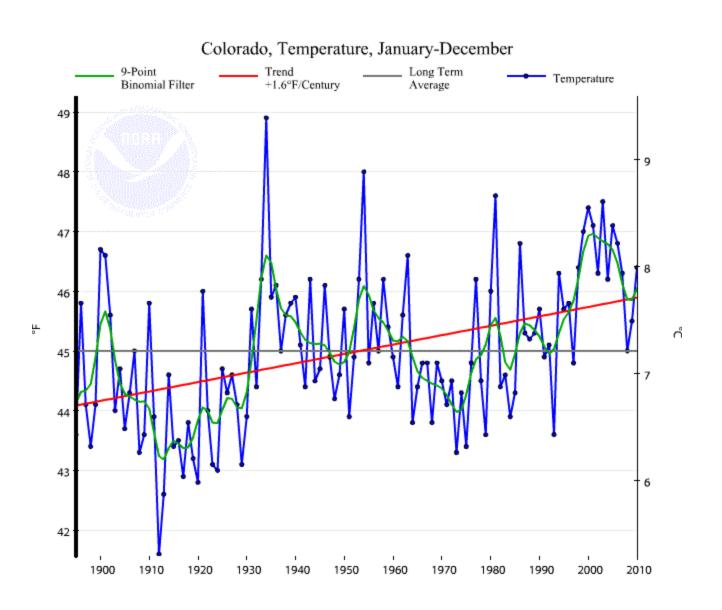
"Correcting" the data.

Curiously,
the 0.4°C / 0.7°F
"warming" between
1950 and 2000 equals
upward "adjustments"
to the data !!!

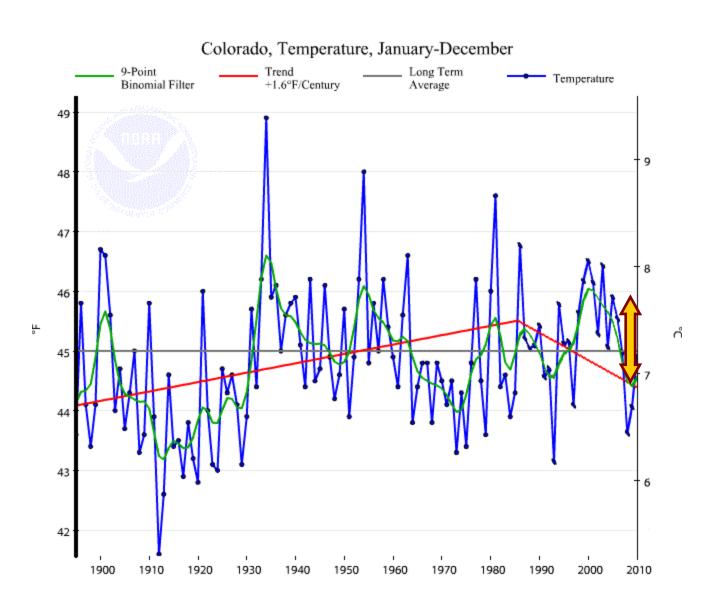




Removing those "corrections" changes the story.

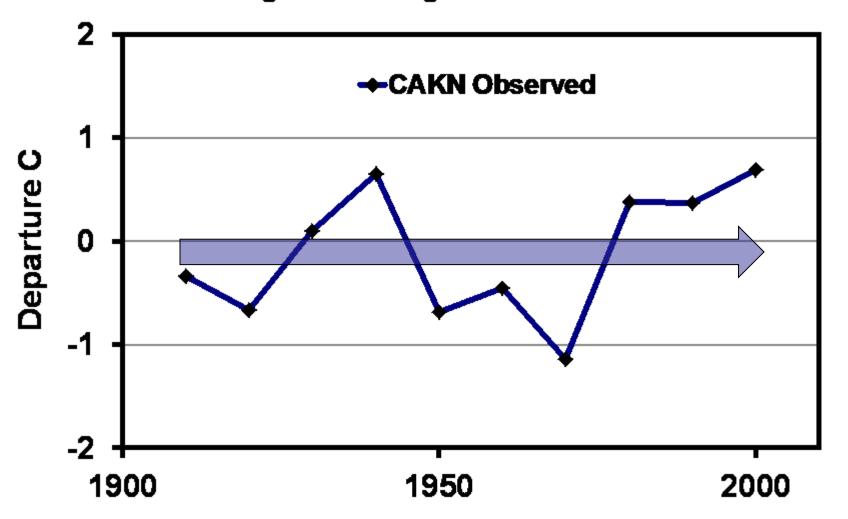


Removing those "corrections" changes the story.



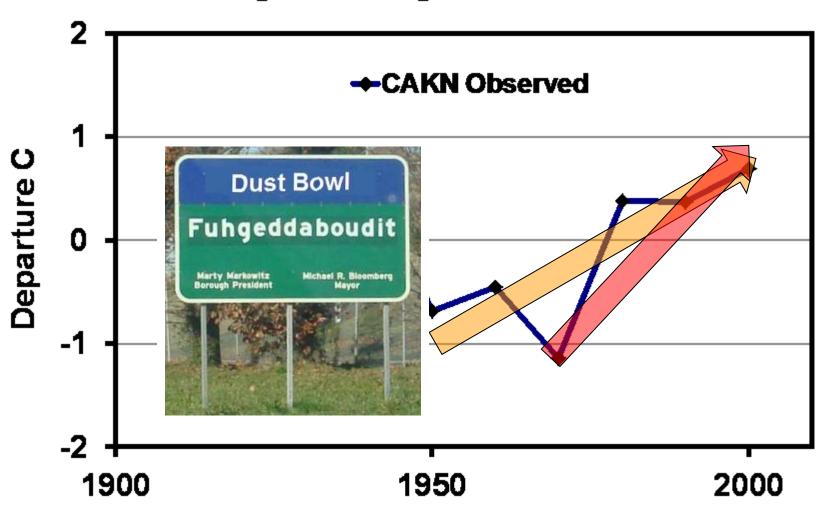
Another trick - if you can't adjust the past, just ignore it.

Central Alaska Decadal Temperatures
Average of 9 long-term rural stations



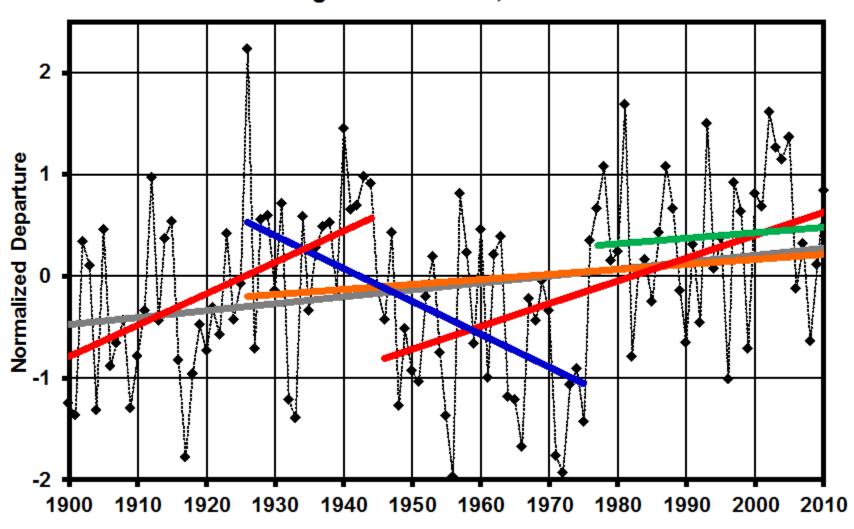
Like this: start with 1950 or 1970, and forget about earlier warm epochs. "Past 50 years..."

Central Alaska Decadal Temperatures
Average of 9 long-term rural stations



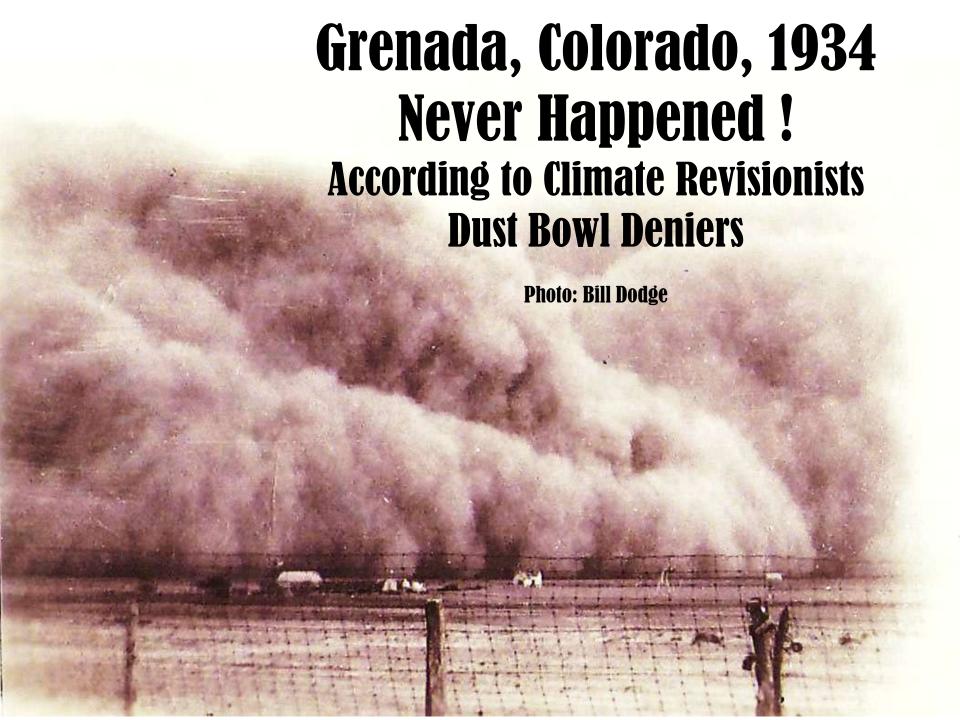
Pick 'n choose your time frame.

Normalized CAKN region Annual Temperatures
Average of 9 stations, with trends



Dude, the sea level went up 20 feet in 10 seconds!





Re-write history by erasing the Dust Bowl, Little Ice Age, and Medieval Warm period from our climate memory.

Just like the "Vanishing Commisar", Nikolai Yezhov.



The Dust Bowl is erased from our climate history, as is the Little Ice Age and the Medieval Warm period.

The "Vanishing Commisar", Nikolai Yezhov, would understand.

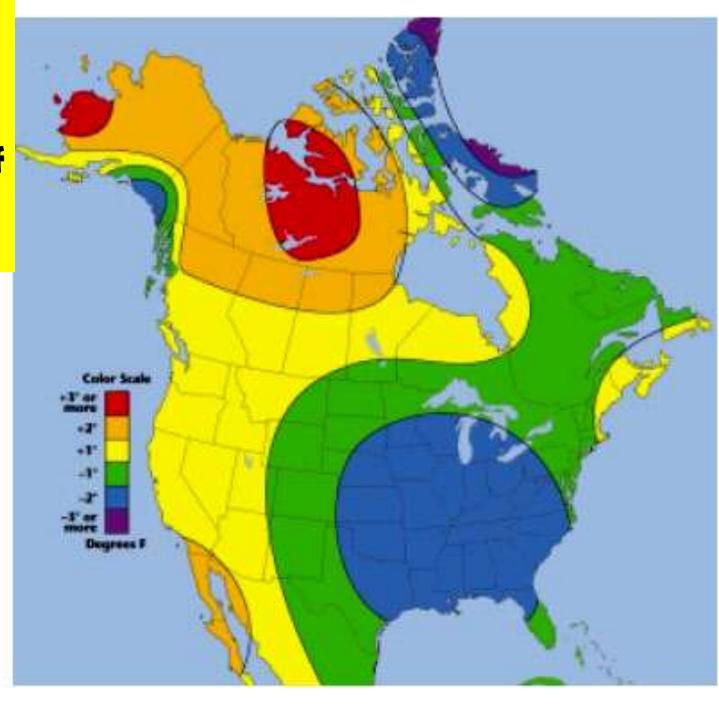


4. Poor Coverage of the Globe

This matters, because

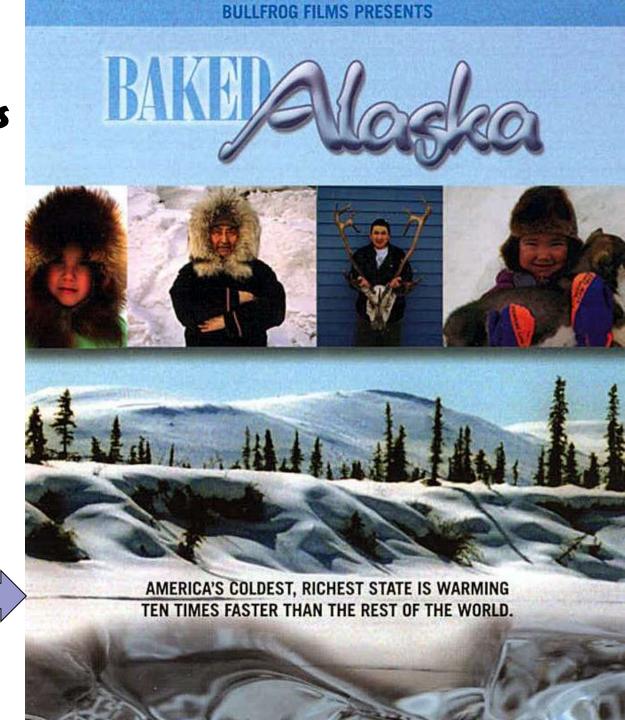
Most climate change is regional on the scale of Rossby waves (3000 km)

Temperature trends over North America since 1930-North America has experienced a mixed bag of climate change over the past 70 years. Most of the western states have warmed by a fraction of a degree, and some arctic regions of Canada and Alaska have warmed as much as 2 degrees. Meanwhile, the eastern half of the U.S. has cooled by a degree or more, NASA GODDARD INSTITUTE FOR SPACE STUDIES



Alaska:
Regional changes
are 10x
Global changes,
according to
Bullfrog Films and
other Warmers.

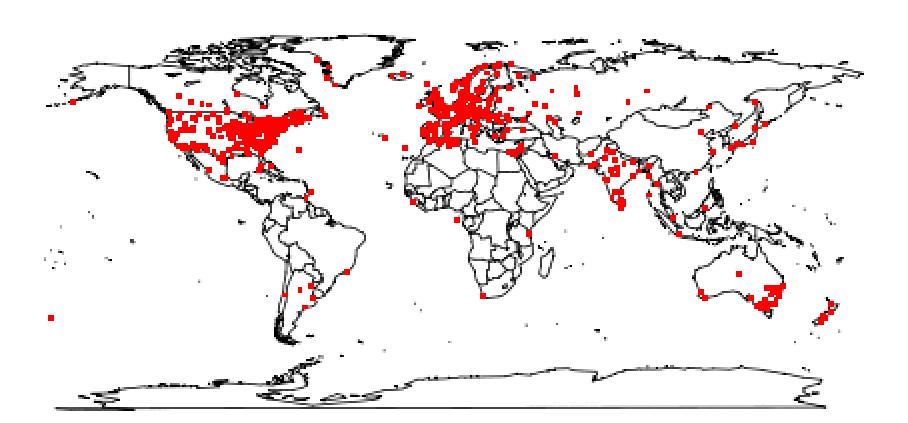
Does this mean the rest of the world warms 10x LESS than Alaska?



Global temperatures are not global. Only a third of the globe is sampled. Huge gaps & voids in the coverage.

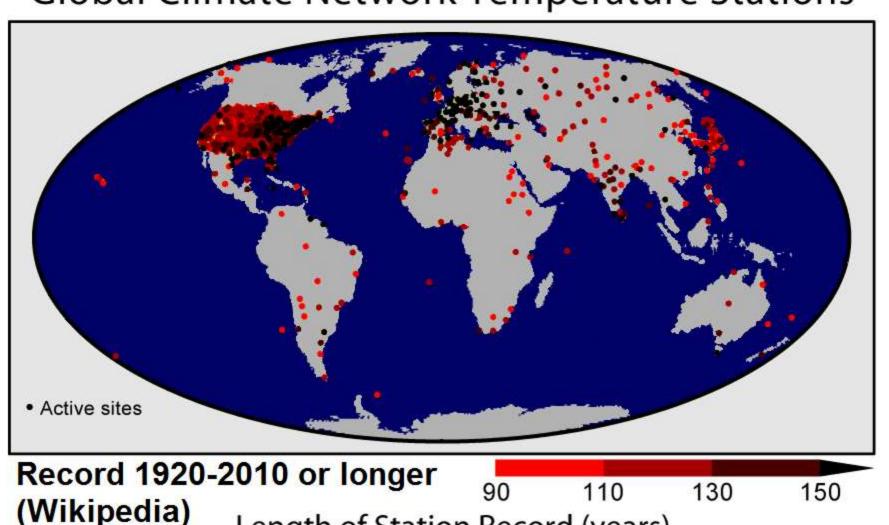
From The Whiteboard

GHCN Stations - 1880



Global temperatures are not global. Over the past century or more, vast regions of the globe have not been consistently measured.

Global Climate Network Temperature Stations



Length of Station Record (years)

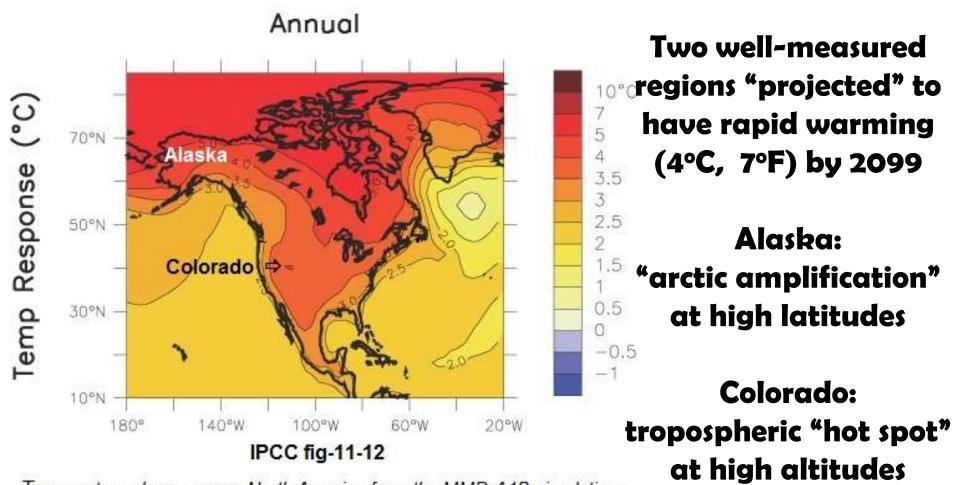
4. Poor Coverage of the Globe

Huge data gaps & voids miss many regional changes that contribute to "global" trends.

Data holes are the devil's playground, where AGW seekers can interpolate, extrapolate, manipulate, and create "data" – and warming trends.

Changes in Latitudes, Changes in Altitudes

Avoid the devil's playground by looking at data rich Regions where you don't have to fill in the blanks.

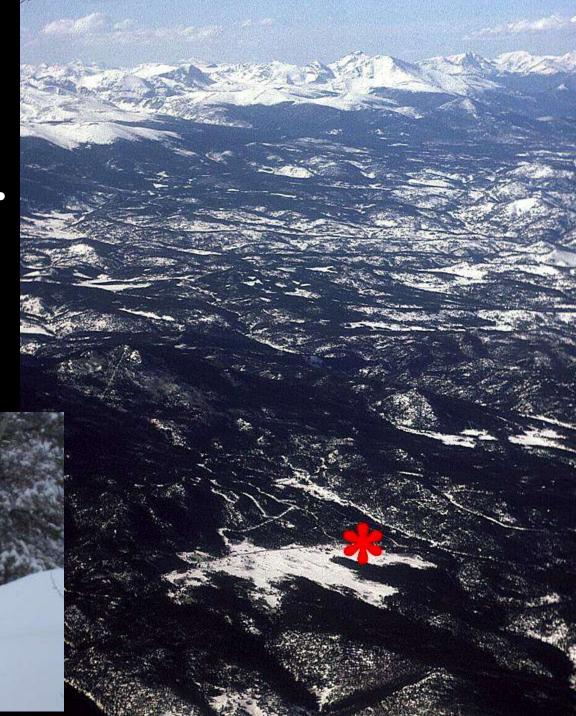


Temperature changes over North America from the MMD-A1B simulations. Annual mean temperature change between 1980 to 1999 and 2080 to 2099, averaged over 21 models

Colorado.

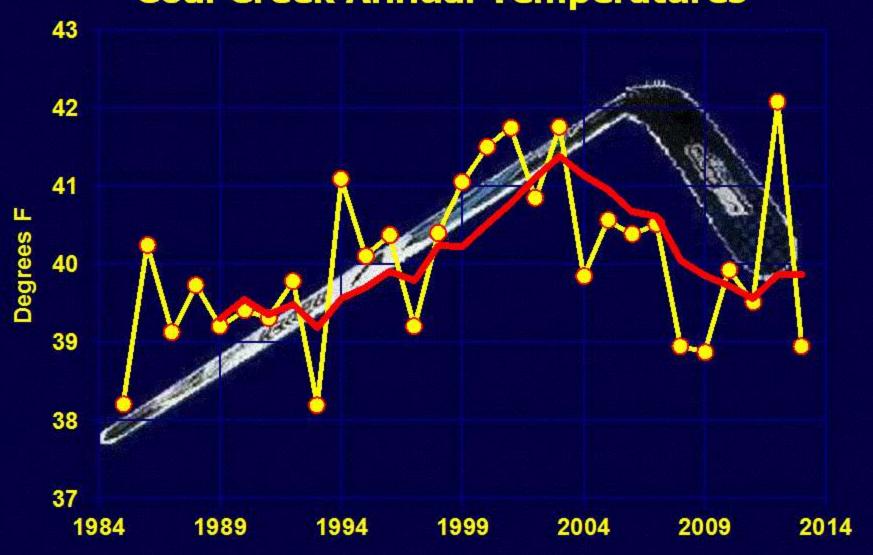
Coal Creek Canyon co-op station, my Home.

Carefully calibrated, maintained & operated in a very rural location.

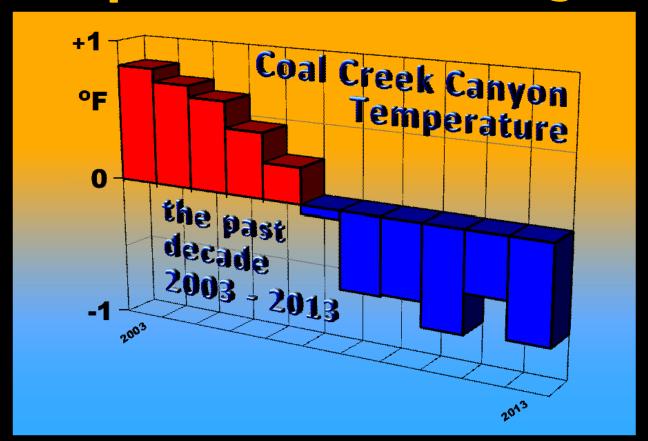


IPCC: should have warmed 2°F in 30 years Actual: 0.5°F warming, cooling past 11 years





IPCC predicts: 1°F warming every 15 years.



Actual:
Down 1.5°F
in 11 years

Colorado, and the rest of the world, hasn't warmed in 16 years (since 1998).

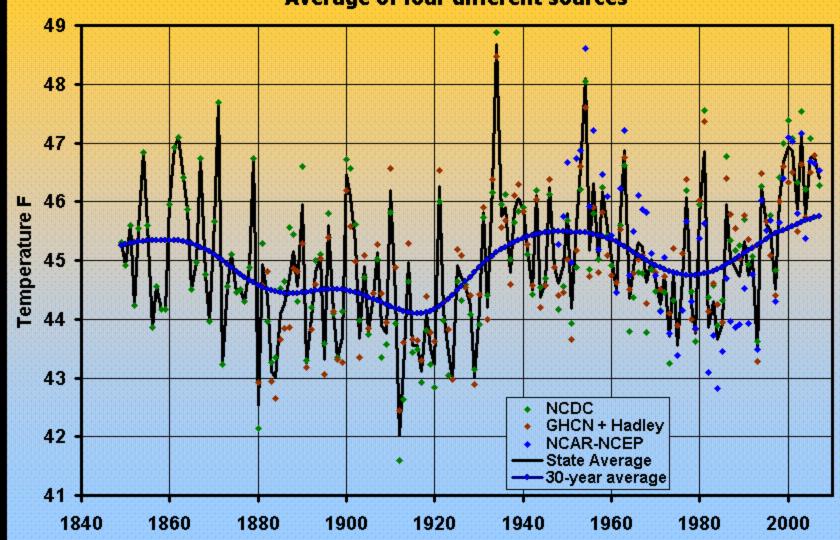
Not to worry, IPCC says we need 17 years of cooling!

IPCC Santer et al. (2011):

"To separate human-caused global warming from the "noise" of purely natural climate fluctuations, temperature records must be at least 17 years long."

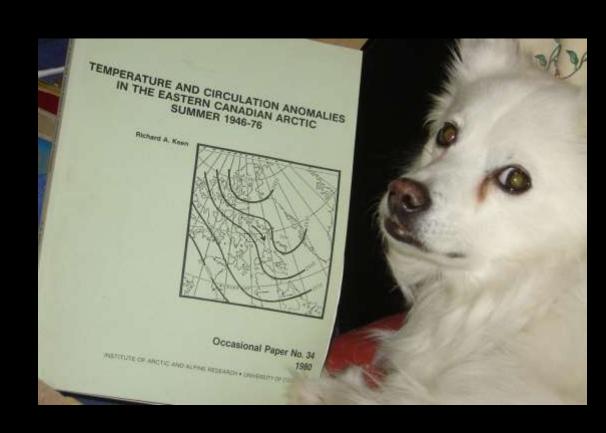
Older slightly adjusted NCDC Colorado data: PDO cycles, but 1/4-degree warming since 1849!





1979

- 1. I finished my thesis
- 2. I got my PhD
- 3. I got a job
- 4. Skylab crashed



5. Global Satellite Temperatures

Finally, true Global Temperatures began in 1979. Do they show Global Warming?

No, the Satellite data show ...



Oh my, 17 – no, 18 – years! And most of the ¼ °C warming before that can be explained by volcanoes

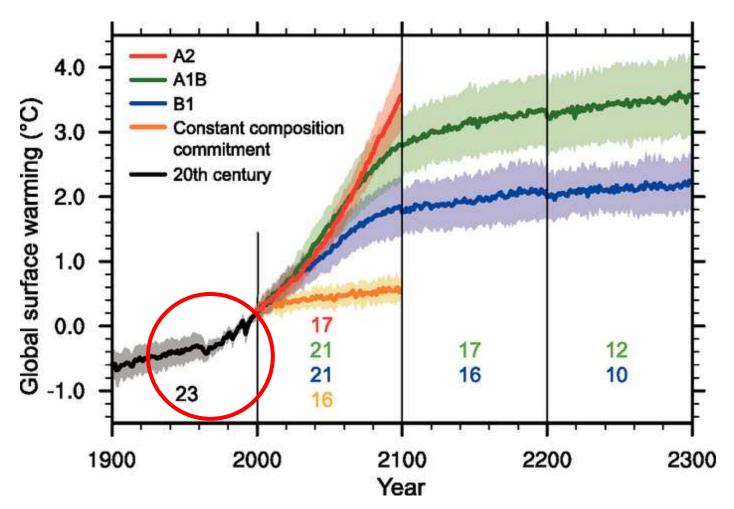
The Art of Detection

- 1. Satellite detects < 0.1°C Global Warming since 1979
- 2. Warming is barely measureable and not noticeable by hominids or thermometers with 1/2°C accuracy
- 3. At current growth rates, CO₂ "global warming" by 2100 will amount to another 0.33°C
- 4. Weather Station records detect larger regional changes (Alaska) from cyclical PDO, AMO, but not AGW

The Art of Deception

- 5. Appearance of Global AGW is inserted into Weather Station data holes via manipulation and adjustments.
- 6. Or simply ignore past warmings and use data since the last cool period (1950-1970s) "Dust Bowl Deniers" "over the past 30 years..." or "since 1950..."

WHY do they do this? So the "data" fits their models.



"People underestimate the power of models.

Observational evidence is not very useful."

John Mitchell, Chief Scientist at the UK Met Office & IPCC

"If you torture the data long enough, it will confess."

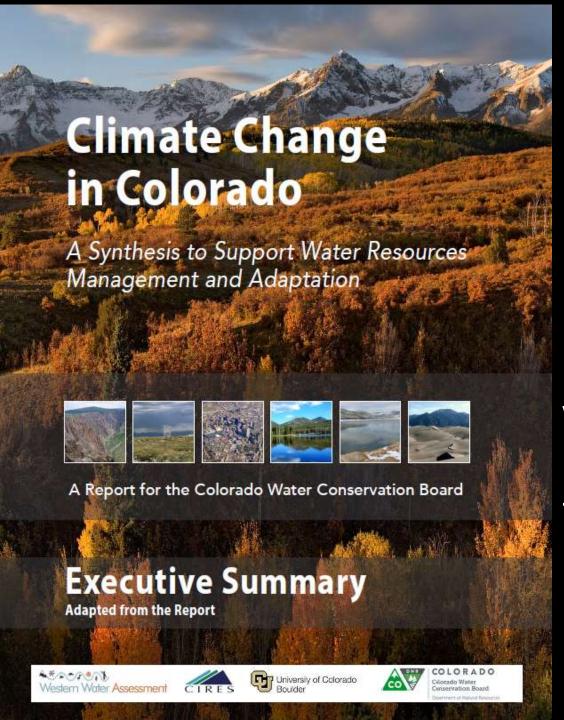


Ronald Coase,
British economist.
Nobel Prize in Economics, 1991.

Torture the data until Adjustments = Model Projections



"... our [temperature adjustment] algorithm is working as designed" - NCDC



Name two "tricks" in this summary statement:

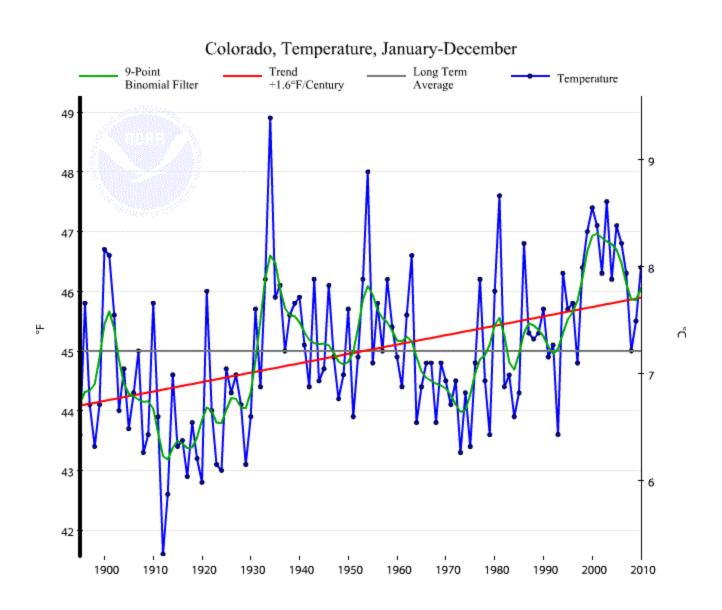
Colorado has warmed:

Statewide average annual temperatures are 2 degrees Fahrenheit higher than they were three decades ago.

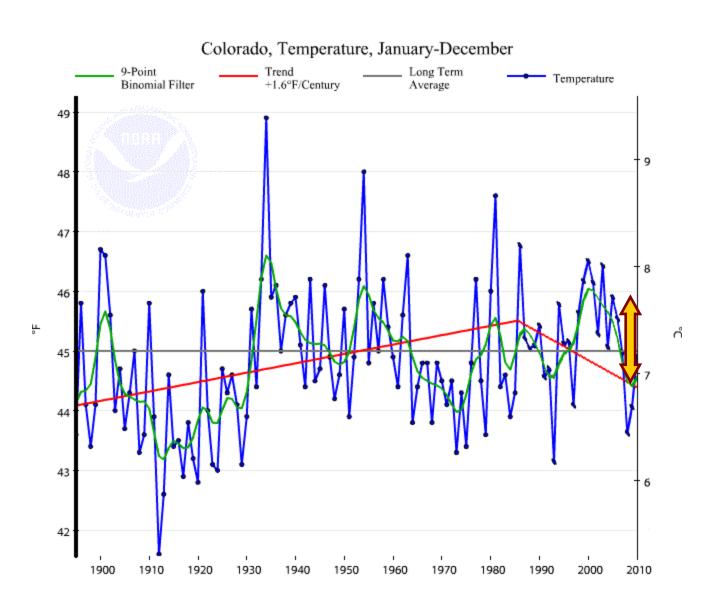
Future warming in the state is likely to lead to more heat waves, wildfires and droughts. Observations show there have already been increasing trends in these three extremes over the past 30 years.

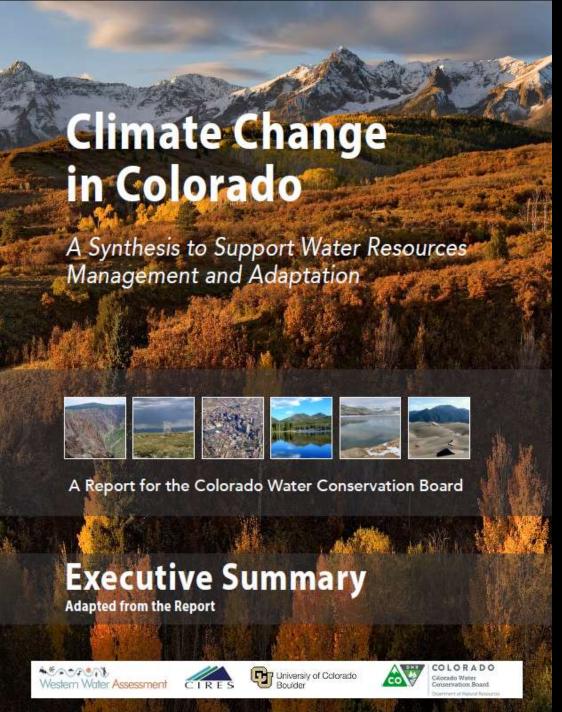
Snowpack is melting earlier, on average, by one to four weeks compared with 30 years ago.

Right! Adjusted data, and the 30-year ruse.



Removing those "corrections" changes the story.





My God, we'll turn into Pueblo!

Climate models indicate that the state's average annual temperature will continue to increase, by 2.5 to 6.5 degrees by 2050.

A 2-degree increase would make Denver's temperatures in 2050 more like Pueblo's today.

A 6-degree shift would push Denver's temperatures beyond any found in Colorado today, to more like those in Albuquerque, New Mexico, today.

The Root of all Evil.

"The National Climate Assessment (NCA) is being conducted under the auspices of the Global Change Research Act of 1990, which requires a report to the President and the Congress that evaluates, integrates and interprets the findings of the \$2.6 billion USGCRP every four years."

" aimed at understanding and responding to global change, including the cumulative effects of human activities"





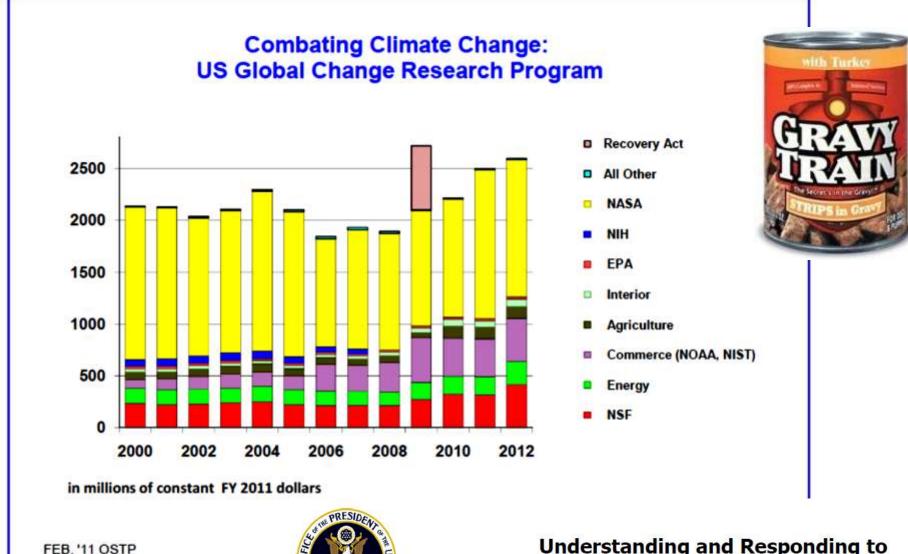


Figure 1.

2011 figures are preliminary estimates.

Understanding and Responding to Our Changing Planet

The U.S. Global Change Research Program in the 2012 Budget

After inheriting a program suffering from several years of declining funding, the Obama Administration has revitalized the USGCRP (see Figure 1). The 2009 Omnibus Appropriations







"The stated aims of the IPCC are to assess scientific information relevant to:

- human-induced climate change,
- the impacts of human-induced climate change,
- options for adaptation and mitigation"

Translation: The IPCC's role is to assess human induced climate change, not to determine if it is real. Just like the USGCRP

Start here IPCC approves Publication outline of report WG / IPCC accepts/approves Governments. Report and SPM organisations nominate experts Final distribution and Government **Bureaux select Authors** Review of SPM Authors Authors prepare prepare 1st - order FINAL DRAFT DRAFT Authors prepare 2nd - order **Expert and** DRAFT Expert Government Review Review Peer reviewed and internationally available scientific technical and socio-economic literature, manuscripts made available for IPCC review and selected non-peer reviewed literature produced by other relevant institutions including industry

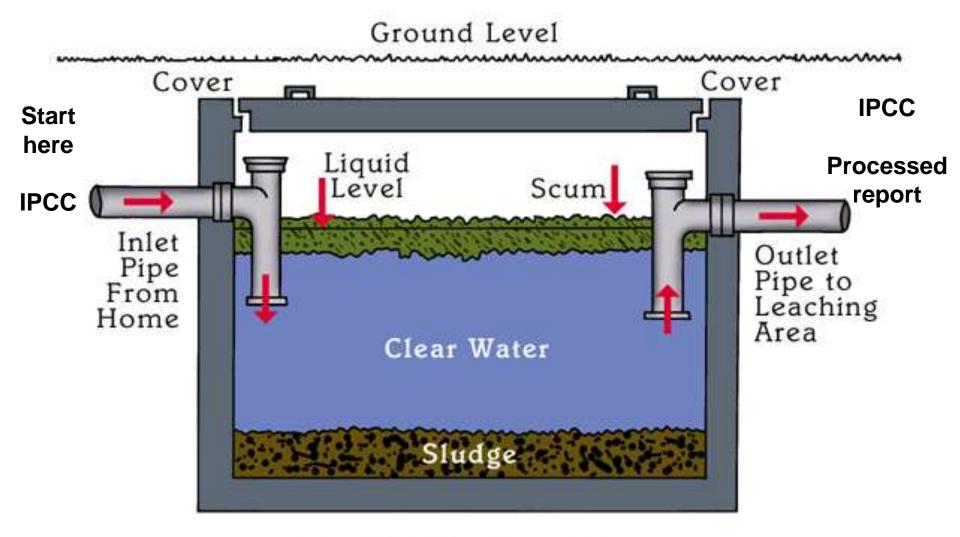
IPCC flow chart.

The IPCC panel
"approves" the outline
of the report before
the authors are
selected, then
chooses the authors,
and approves the final
product when the
authors are done.

Along the way there's "government reviews".

Green = Government Blue = Science

IPCC flow chart is modeled after another flow chart.



Septic Tank

Who's paying for all this?

Who do you think?

WHY are you paying for this?

"Urgent and unprecedented environmental and social changes challenge scientists to define a new social contract...a commitment on the part of all scientists to devote their energies and talents to the most pressing problems of the day, in proportion to their importance, in exchange for public funding."

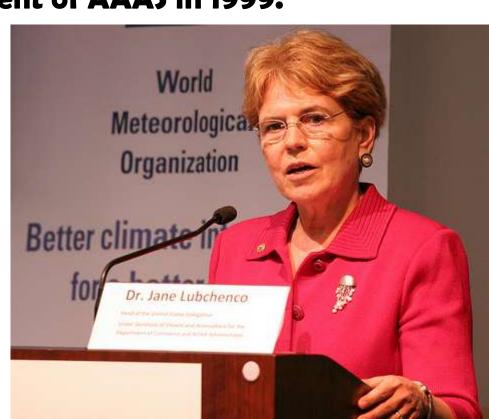
-- Jane Lubchenco when she was president of AAAS in 1999.

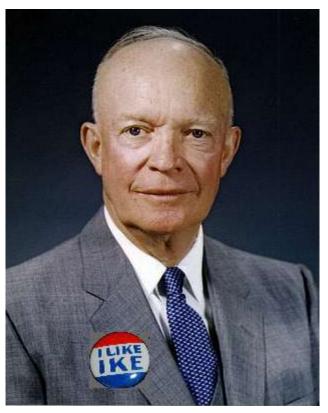
Now Obama's NOAA chief.

Translation:

We'll pay you to study what WE decide is important (global warming).

We won't pay you to not study global warming.





President
Dwight D.
Eisenhower
Farewell Address
17 January 1961

51 years ago

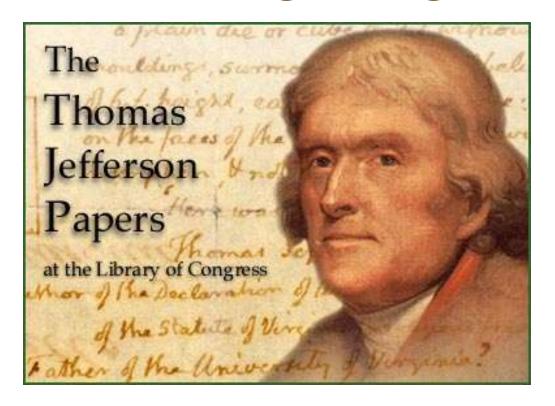
Akin to, and largely responsible for the sweeping changes in our industrial-military posture, has been the technological revolution during recent decades. In this revolution, research has become central; it also becomes more formalized, complex, and costly. A steadily increasing share is conducted for, by, or at the direction of, the Federal government.

Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge costs, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers.

The prospect of domination of the nation's scholars by Federal employment, project allocations, and the power of money is ever present -- and is gravely to be regarded.

Yet, in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific-technological elite.

Two Billion dollars per year to the climate industry (plus a Billion stimulus), and they still don't get it right.



"It is error alone which needs the support of government. Truth can stand by itself."

-- Thomas Jefferson: Notes on Virginia, 1782

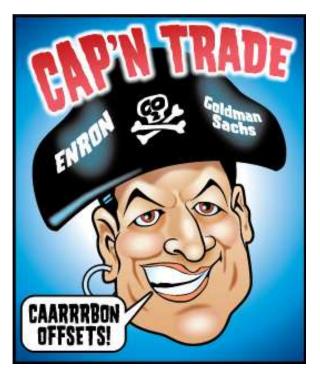


No wonder
Jefferson is on the
2-dollar bill, and
Obama is on the
Trillion.

Which is worth more?



The direct impact of human CO₂ on climate is at most 0.2°C, the US contribution is a fraction of that, and US CO2 emissions are now decreasing.



Therefore, strategies like Cap'n Trade and Kyoto are

Ineffective Policies

that will

Fail to Solve a

Nonexistent problem.

Why do we still consider them? To justify other agendas, like...

Energy Policy & EPA "Power" grabs.

The price of purchased "science" is the tip of the iceberg.
Science is used to justify much more costly political policies.
Example: Obama's rejection of the Keystone Pipeline.
Compare the pipeline map (left) with the 2008 electoral map (right) and draw your own conclusions as to the real reason for using climate as an excuse to reject the project.





Red states are populated by undeserving boors who did not vote for Obama

