

Environmental Watch

Examining Environmental Claims and Their Costs • February 2006

Northwest Global Warming Data Isn't As Clear As Some Claim

Claim

“Pacific Northwest temperatures are rising faster than the global average.”
Puget Sound Action Team, “Uncertain Future: Climate Change and Its Effects on Puget Sound,” October 2005, p. 6

“The Puget Sound region warmed at a rate substantially greater than the global warming trend -- average annual temperature increased 2.3°F (1.3°C) during the 20th century.”
Puget Sound Action Team, “Uncertain Future: Climate Change and Its Effects on Puget Sound,” October 2005, p. 13

Facts

How you choose the start and endpoint when comparing temperatures makes all the difference.

There does appear to be some increase in temperatures in the Puget Sound region. Examining temperature trends across the Puget Sound shows that temperature increases during the last 50 years range from .5°F to more than 3.0°F.

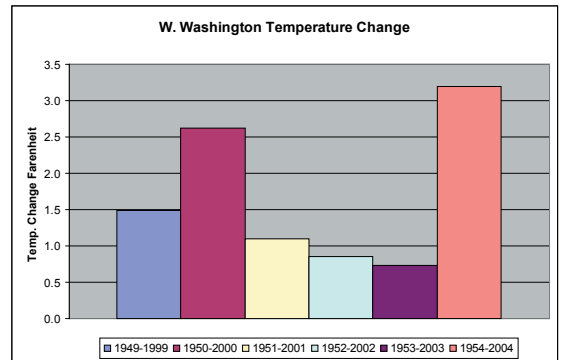


Table 1

A closer look at the numbers shows that some of the conclusions drawn from those numbers don't add up. In fact, some of the data directly contradicts claims made by the Puget Sound Action Team (PSAT) report.

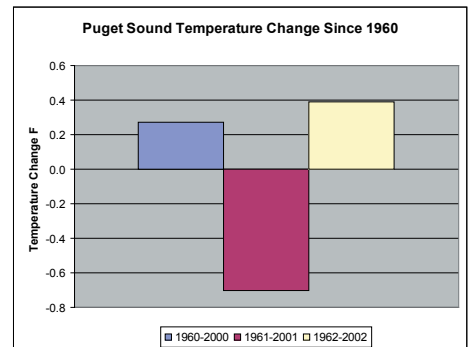


Table 2

For instance, choosing the starting and ending points for the comparison is critical. The PSAT report chooses 1950 as the starting point. Temperatures in 1950 were some of the coldest in the last century. Using temperature data from five points across Puget Sound, Table 1 shows that using 1950 as a starting point yields one of the largest increases in temperature. Similarly, 2004 was one of the hottest, yielding another large increase.

If we choose the last 40 years, however, the data looks very different (Table 2). The temperature increases are less and there is even a sharp drop using the period 1961-2001. It could be argued that looking at a shorter period of time reduces the potential change. This, however, is not what is argued by PSAT.

As noted on pg. 13 of the PSAT report (Table 3), they argue the rate of temperature change during the last century quickens, showing little temperature change between 1950 and 1960. The temperature change from 1960-2000 should be similar to the change between 1950-2000. That is not, however, what we find.

So, what could cause these differences?

First, the chart to the right is created using “five representative monitoring stations.” They do not list which five stations,

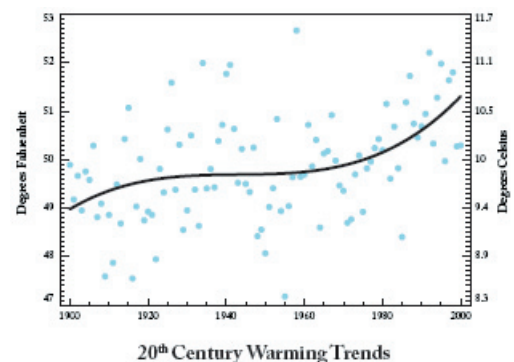


Table 3



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making any temperature comparison apples-to-oranges. For our comparison Tables 1 and 2 are generated by selecting data from five locations using two criteria: accurate data is available for the last fifty years and the five locations range from the Bellingham area to the South Puget Sound. Our data is collected from the Western Region Climate Center (<http://www.wrcc.dri.edu/summary/climsmwa.html>). There is the possibility that their or our “representative” stations are skewed and do not reflect the overall trends.

Another indication that PSAT’s conclusions are odd come from Mt. Rainier’s temperature data. One dramatic claim made in the report is that glaciers are retreating rapidly “in response to warming.” The data from Mt. Rainier (which are reliable from 1955 onward), however, shows that temperatures there are actually lower than they were forty years ago. The only circumstance in which this is not true is when we use the unusually warm year of 2004. Complete 2005 data was not available.

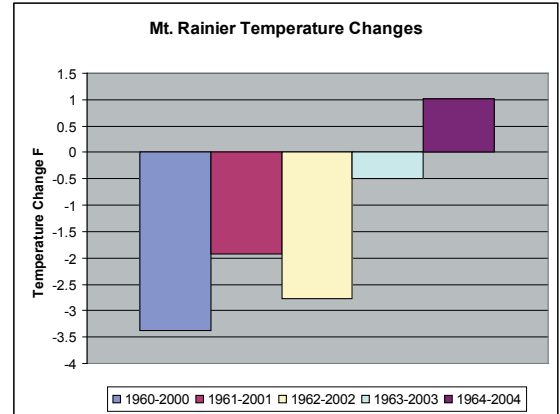


Table 4

If we assume that PSAT is correct in saying that all Puget Sound glaciers are receding, it would be difficult to claim it is due to temperature, at least on Mt. Rainier.

Finally, there is a problem of making claims about increases of a single degree Fahrenheit when variations from year to year are wider than that. Put simply, when is a change of a few degrees part of a normal variation and when is it indicative of a trend? The PSAT temperature trend graph (Table 3) is an attempt to solve for this question. As the above analysis shows, however, there are actually greater changes from 1950-1960 than from 1960-2000, the opposite of what is argued in the PSAT report.

The purpose of this study is not to take on all global warming data nor even to deny that there is a warming trend. It is simply to look at one of the underpinnings of the PSAT report and the specific claim that temperature in the Puget Sound region is rising faster than the global average.

Looking at a range of dates shows that that claim appears to be incorrect or at the very least incomplete. Some areas are warmer, but other areas, like Mt. Rainier, have actually cooled, contradicting some of the conclusions found in the PSAT report. Further, the claim that temperature increases are gaining pace is also questionable.

Costs

Already new laws, taxes and regulations are being proposed to combat this warming trend. The expensive new car emissions standards and a proposed “green energy” initiative are both designed to combat global warming. The use of LEED “green building” standards are justified based on global warming projections. The City of Seattle has already built in a rise in sea levels from global warming into the costs of replacing the sea wall should the downtown viaduct be replaced with a tunnel.

All of these expenses are based on uncertain temperature projections and their extrapolated impacts. But as noted above, the rate of change, at the very least, is questionable. Claims like those made by PSAT are designed to create a sense of crisis that encourages policymakers to enact rules that ignore expensive financial impacts.

We should continue to look at ways to reduce carbon emissions, opportunities to encourage carbon sequestration and carbon credits. We should take care, however, when mandating costly new rules because we believe we are in a “crisis.”