

The Salt Lake Tribune

Utah's hottest summer yet? Might be

Weather • The warming trend continues with August around the corner.

BY JUDY FAHYS

THE SALT LAKE TRIBUNE

PUBLISHED: JULY 27, 2013 11:53AM

UPDATED: JULY 27, 2013 02:01PM

This summer might well be staggering toward the sweltering distinction of being the Salt Lake Valley's hottest on record.

Jim Steenburgh, professor of atmospheric sciences at the University of Utah, observed this week that June and July have "a pretty good chance" of being the warmest on average in the past 65 years of observation, and it is "very possible" they will be the warmest since records began in the Salt Lake Valley in 1874.

Steenburgh said the impetus behind his blog posts on the trend was simple.

"It's been hot."

Steenburgh looked at temperature in a variety of ways, starting with the increase in average daily highs since 1948, the starting point for his analysis. He noted that daily highs in the 10-year span beginning then (at 87.4 degrees Fahrenheit) were 2 degrees lower than over the past decade (89.6).

And the trend was even more dramatic for minimum temperatures — how cool it gets overnight — in the summer months.

The minimums of the past decade (63 degrees) averaged 5 degrees higher than the minimums of the 1948-57time frame (57.9).

Others concur with Steenburgh on the notion that it's been remarkably hot so far this summer.

Dave Eskelsen, spokesman for Rocky Mountain Power, pointed out that the electric company, which serves most of Utah, set a new system peak record on July 1, a day when temperatures reached a daily record 104 degrees. That record topped a record in 2012, which itself exceeded a record in 2011.

"Electricity use, particularly on the Wasatch Front, is very sensitive to temperature," he said, adding that consecutive 100-degree-plus days and 80-degree nights tend to boost power demands most. "When we have a string of these days, we're at peak demand."

Another factor is consumer patterns. Residential customers have migrated from swamp coolers to air conditioning.

In the 1990s, Eskelsen explained, about 55-60 percent of those on the Wasatch Front used evaporative cooling, compared with around 20-25 percent who used refrigerated air conditioning.

That scenario basically reversed by 2005, and now most customers cool their homes with refrigerated air conditioning, which uses about 75 percent more electricity than swamp coolers.

Simon Wang of the Utah Climate Center noted that the temperature trends Steenburgh points to were highlighted in a paper published last year. In fact, he noted, the increasingly high averages show up not just in the summer but also in the winter and not just at the Salt Lake City International Airport weather station but elsewhere around Utah.

"For Utah as a whole," he wrote in an email, "we have shown in our [Journal of Climate] paper that the larger increase in [average minimum, overnight temperatures] is persistent throughout the year, except for March. It is also a state-wide feature."

In the second part of his blog on this hot summer, Steenburgh suggested two likely factors behind the trend are global warming and urbanization.

"We can conclude that trends at the Salt Lake City airport are consistent with expectations from global warming, but the size of the contribution remains undetermined," he said. "I suspect it is significant, but that other factors [like urbanization] are also important."

At the Salt Lake City office of the National Weather Service, Monica Traphagen, stopped short of discussing the longer-term trends, though she echoed Steenburgh's assessment that the heat is on now.

Friday's 101-degree high at the airport, she said, helped this summer tie thus far for third as the summer with the most 100-degree-plus days at 17, sharing third place with 2007 and 2003. (The years 1994 and 1960 tied for the record number of 100-degree days at 21.) Meanwhile, the average for the number of 100-degree days is five.

She deferred to the weather service's climate expert on whether the trend might dog the Salt Lake Valley all the way through the summer months.

"I couldn't tell you that with any degree of certainty," she said when asked about the possibility that 2013 could prove the area's hottest ever. "As a meteorologist, I can tell you what's going to happen this week."

And that, the data suggest to her, is that daily highs are expected to keep northern Utah pretty darn hot.

fahys@sltrib.com

Twitter: @judyfutih

—

Warming trend

Summer heat is 2 degrees Fahrenheit higher on average now at 89.6 than it was just a few decades ago. The average daily high between 1948-57 was 87.4.

Overnight average temperatures increased more than twice as much, with the average over the past decade at 63 degrees, compared with 57.9 in the 1948-57 period. That's more than 5 degrees hotter on average.

About 45 percent of electricity people use at home in the summer is for cooling.

People use about 20 percent more electricity on 100-degree days than on 90-degree days.

The National Weather Service has logged 37 days this summer when temperatures have been 95 or above. Last summer it was 45. The average is 23 days, but there have been as many as 51, a record set in 1951.

Sources: Wasatch Weather Weenies, National Weather Service, Rocky Mountain Power