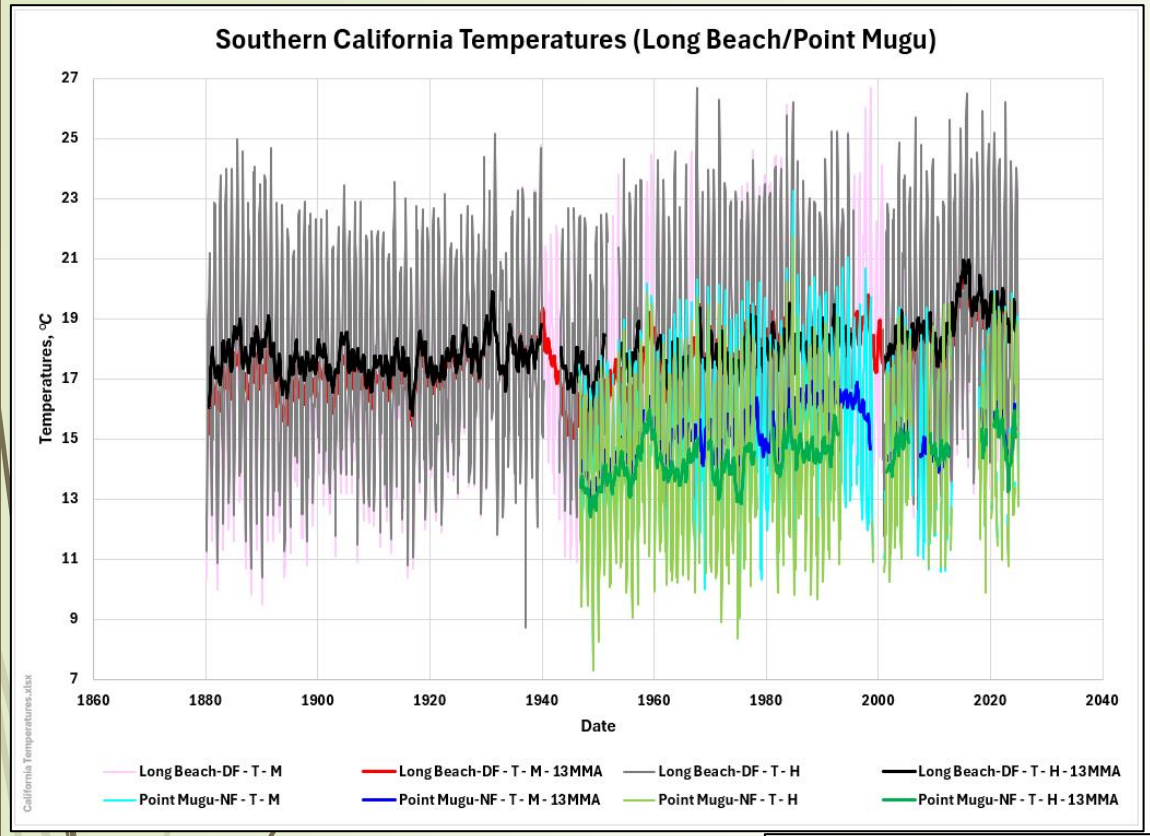
Are the LA Fires Due To 'Climate Change'? – Maps and Visuals

More detail? climatechangeandmusic.com

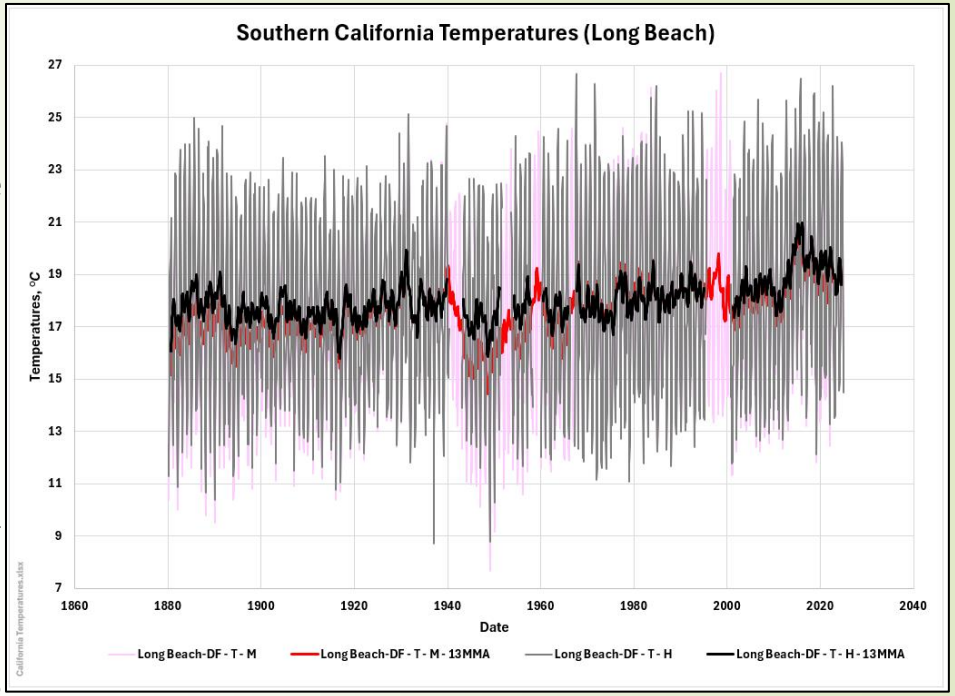
California has been subjected to and is still dealing with a horrific natural disaster. The fires have been devastating. To date 25 people have lost their lives, over 12,000 structures have been damaged or destroyed and over 100,000 people have been forced to leave their homes. As of November 14th, there were 4 fires still burning. The Kenneth and other fires have been extinguished. Total acreage burned is 40,425 acres. For perspective, that is just 3.8% of California's acreage burnt in 2024 (1,050,012 acres). There are many potential reasons put forward for these horrific fires. Among them, firefighting budget cuts, empty water reservoirs, inefficient/poorly maintained fire hydrants, improperly staffed and poorly maintained firefighting equipment, equipment not up to California's emission standards, poorly maintained power line right of ways, active power lines, improper fire prevention planning, arson, and yes, even climate change (Santa Ana winds, prolonged lack of precipitation, etc.). The focus of this post will be 'Climate Change'.

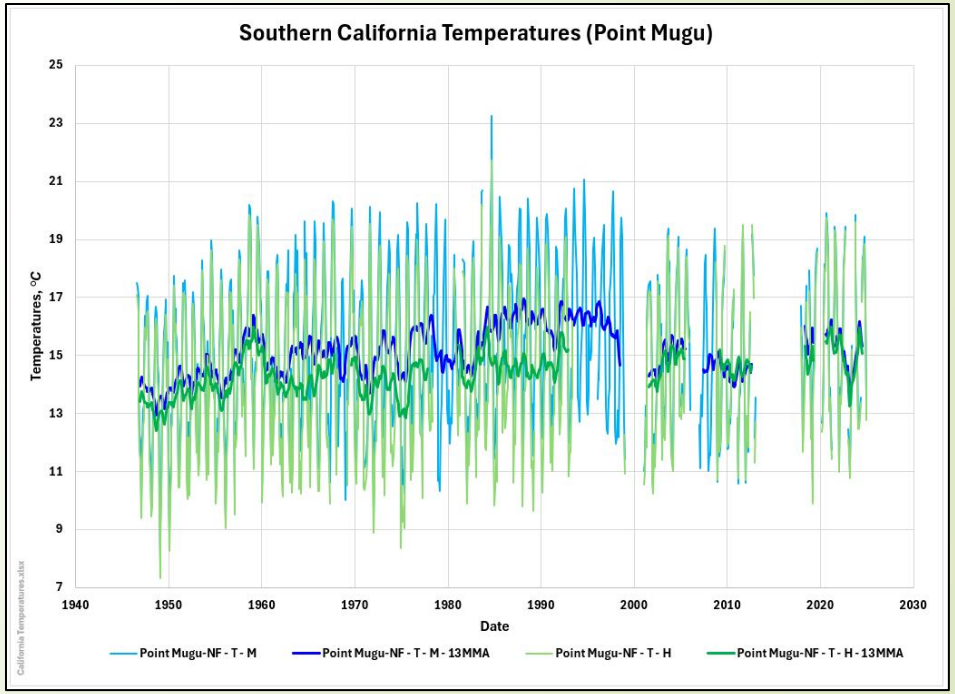
LA Fires Maps & Visuals

Are the LA Fires Due To 'Climate Change'? – Temperatures



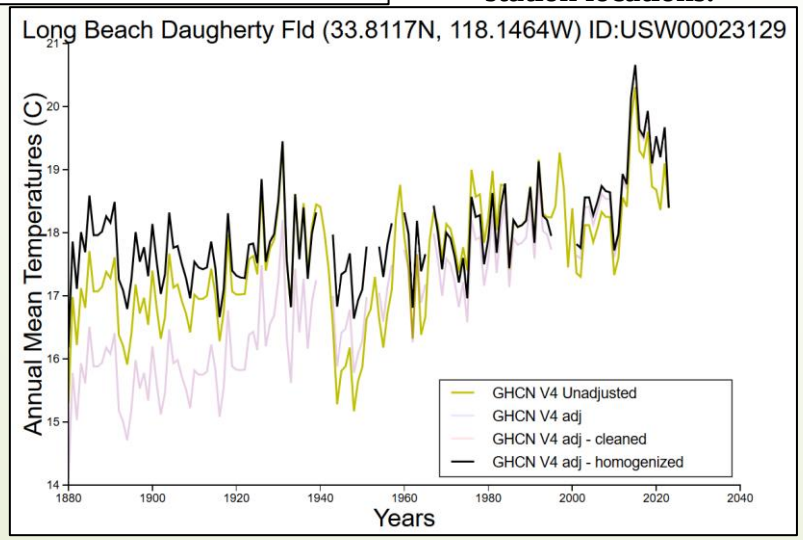
How do we measure 'Climate Change' and its contribution to the LA fires? The logical place to start is the area temperatures. These plots are based on the data available on NASA/GISS' weather station data. Point Mugu is just west of the Palisades fire, Long Beach is just to the southwest. The Palisades, Point Mugu and Long Beach are all located along (or close to) the coast. The chart below is an example of the yearly data as presented on NASA/GISS' station data website. The other three plots show the monthly data and the 13 Month Moving Average (MMA) for both station locations.





LA Fires Temperatures

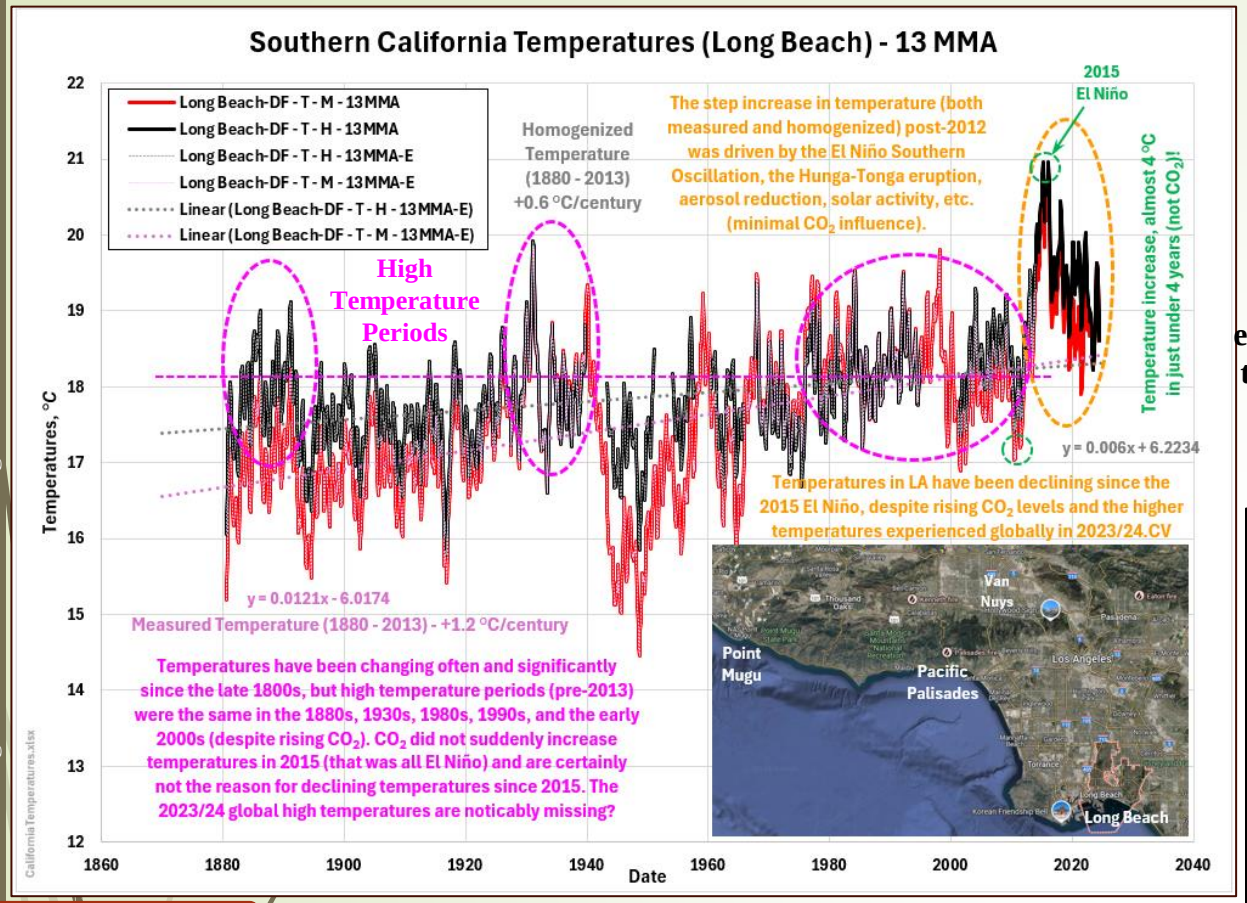
Both the measured and homogenized temperature data sets are shown here. Long Beach data goes back to 1880, Point Mugu data Collection began in the 1940s. The homogenization at Long Beach was not as overtly dramatic (and the adjustments were in the opposite direction to) as many places around the globe. Temperature adjustments in the past are typically negative, here, they were positive. The Point Mugu data had some significant negative adjustments in the middle portion of the data. Both stations had measured data that was completely removed. What does the data show?

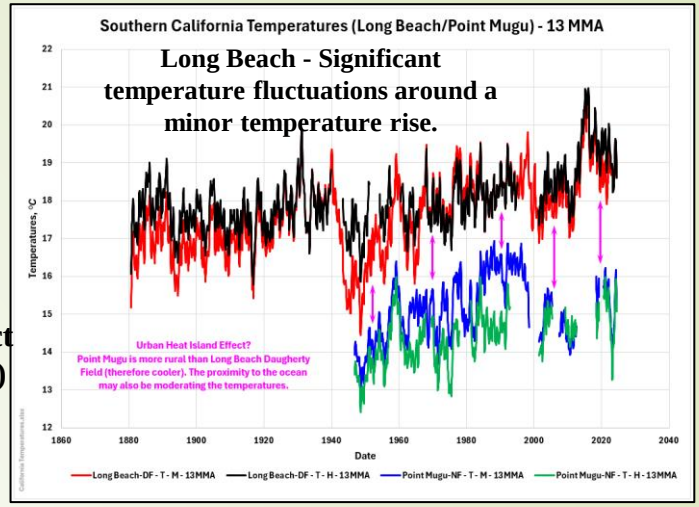


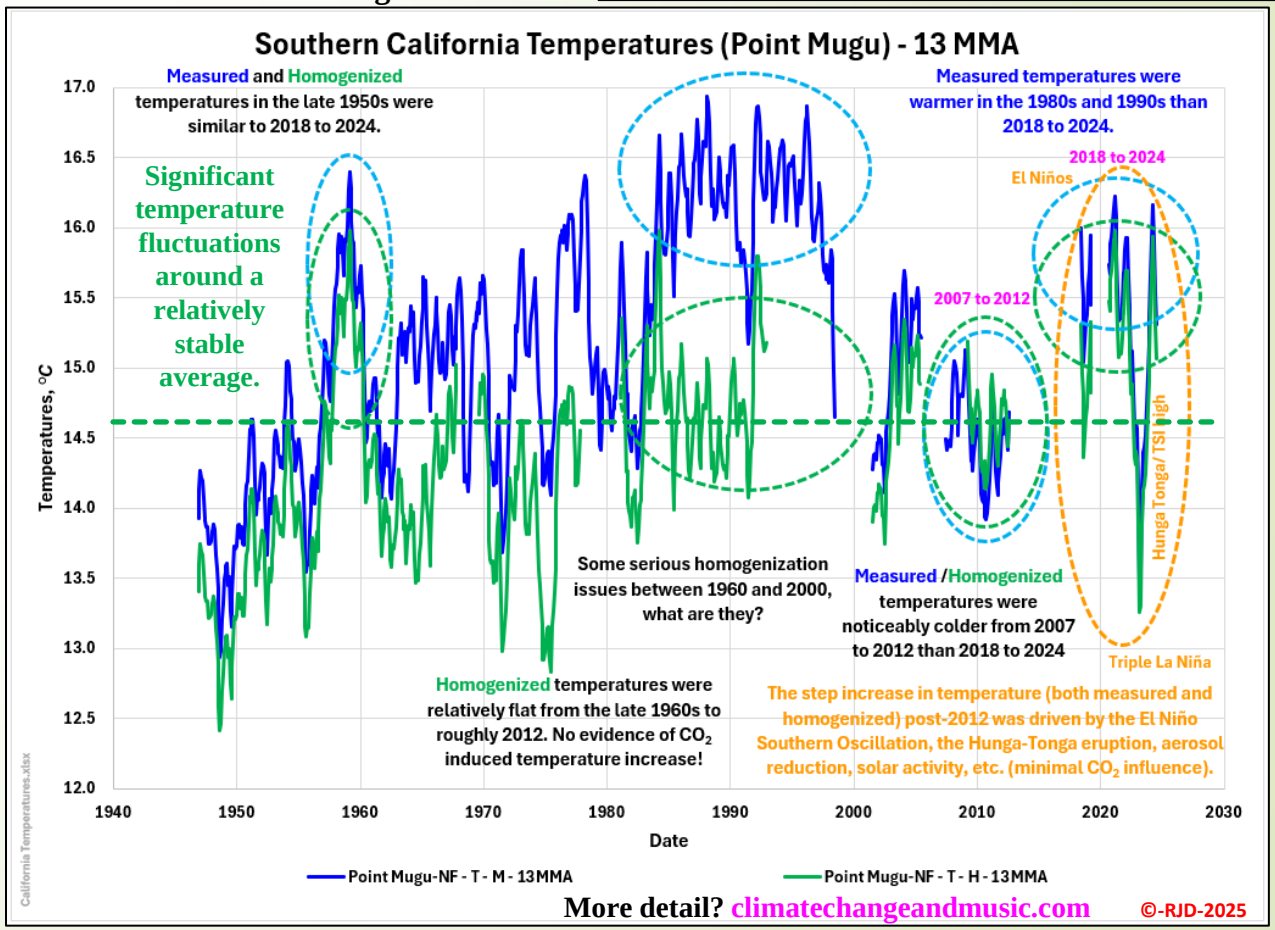
CSS-65c

Are the LA Fires Due To 'Climate Change'? Temperatures – 13 MMA

The main difference in the two data sets (Long Beach and Point Mugu) is likely related to the Urban Heat Island (UHI) effect and their relative position with respect to the ocean. Long Beach (Daugherty Field) is much more urban and further from the coast (less ocean temperature influence) than the Point Mugu site.





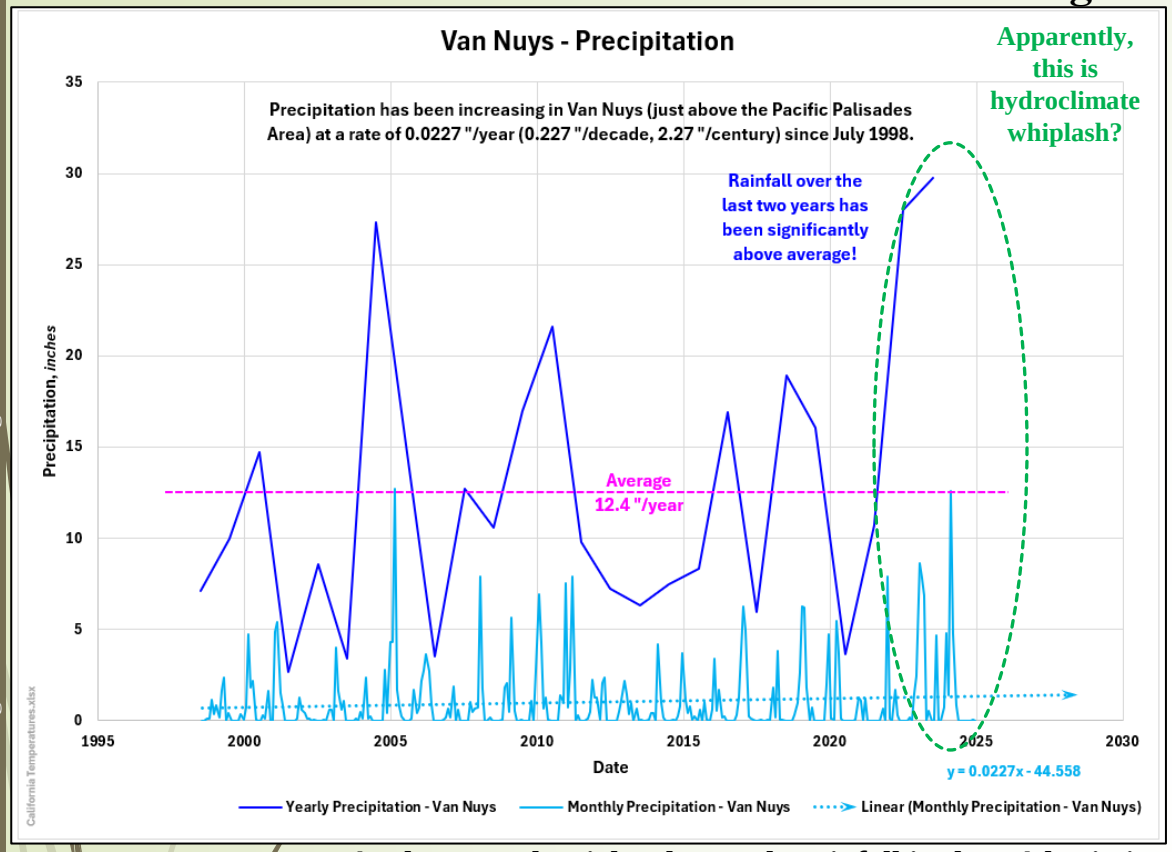


LA Fires Temperatures 13 MMA

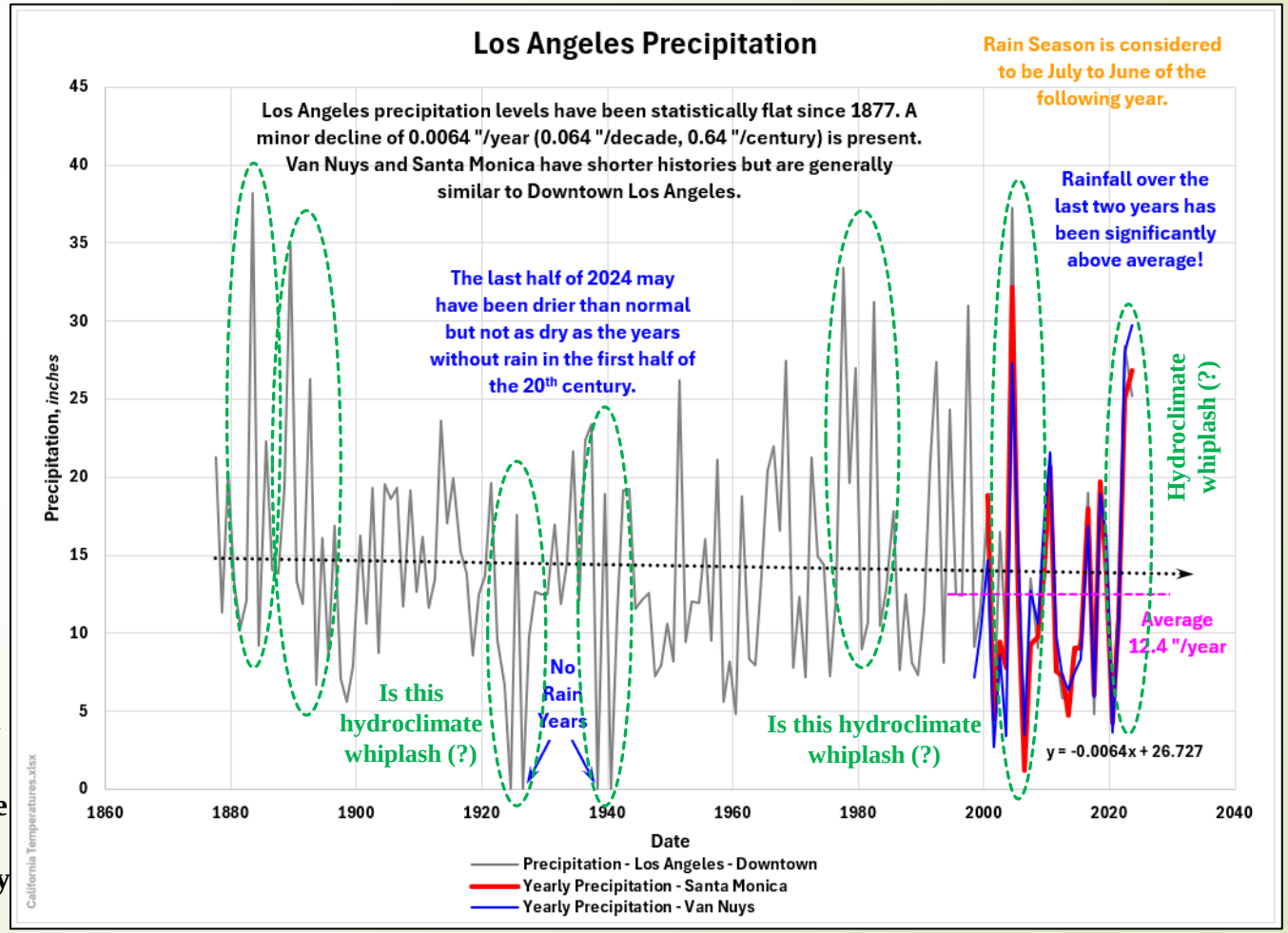
The temperatures at Long Beach have been very erratic pre-2015. The measured temperatures increased from 1880 to 2015, but have not increased substantially since the 1880s. How much of that minor increase is due to the UHI effect? There was a dramatic jump in temperatures in 2015 (most likely due to the strong 2015 El Niño). That is not a response to CO_2. Since 2015, temperatures have declined in LA (again not a response to CO_2). Long Beach temperatures were not subjected to severe homogenization. Point Mugu temperatures had some serious homogenization between the early 1960s to the late 1990s. Measured temperatures seemed unusually high given the Long Beach temperatures. Homogenized temperatures are like Long Beach (pre-2015, relatively flat). 2015+ data is generally higher but intermittent. There appears to be very little climate change in the LA temperature data. But there is significant weather changes from month to month and year to year that has little to do with CO_2!

More detail? climatechangeandmusic.com

Are the LA Fires Due To 'Climate Change'? – Precipitation



Precipitation is the other major parameter affecting forest fire potential. The plot below shows precipitation levels in Los Angeles since 1877. Despite the current All CO_2, All the Time alarmist narrative, yearly precipitation levels, while erratic, have been statistically flat since 1877 (declining at just 0.64" per century). The alarmist community has routinely been proclaiming that the general area has been experiencing severe drought conditions due to 'Climate Change'. That ignores the area's natural long term pre-industrial dry conditions and the less common high precipitation levels of 2023 and 2024. The obviously much drier conditions of the first half of the 20th century have also been ignored. Fire conditions like January 2025 have been worse many times in LA's history (just about every year according to the monthly data, shown to the left). Like LA temperatures, LA precipitation levels have minimal impacts from 'climate change'.



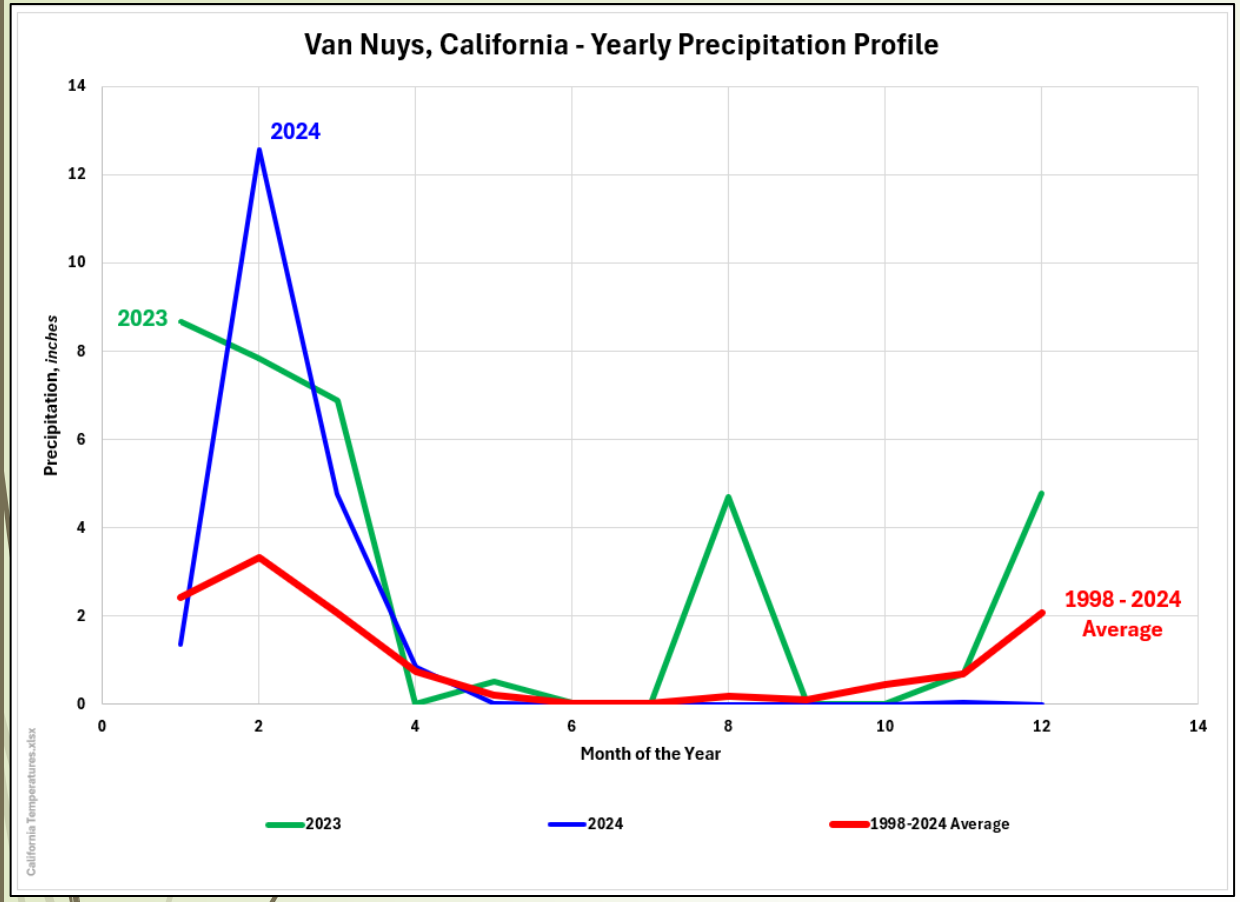
LA Fires Precipitation

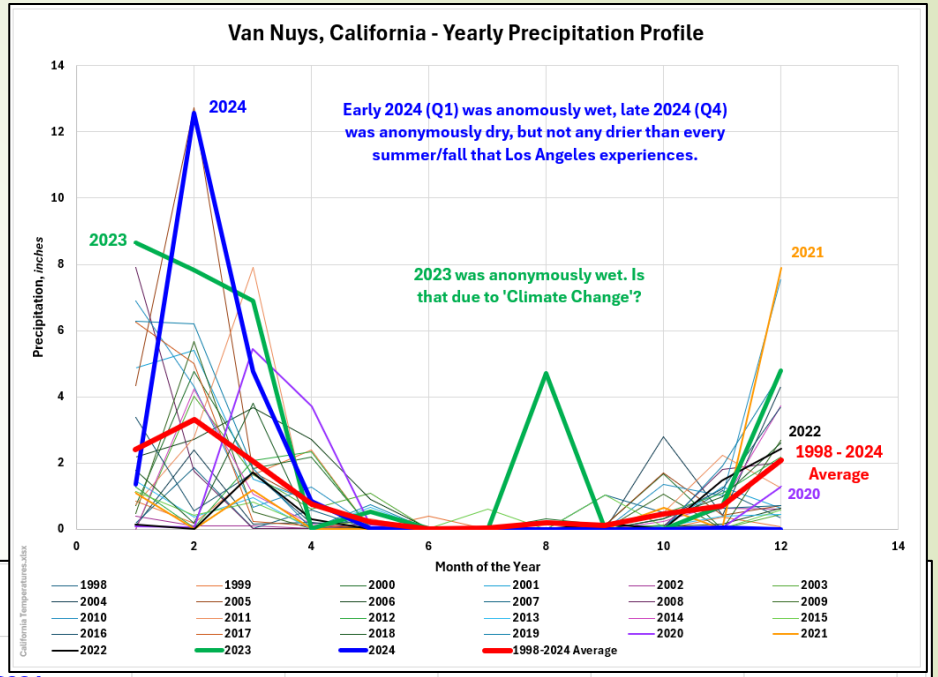
As shown to the right, the yearly rainfall in the LA basin is relatively uniform (i.e.: LA downtown levels are consistent with areas like Van Nuys and Santa Monica (the closest measurements to the Pacific Palisades fire)). Both the yearly and monthly Van Nuys precipitation is shown above. The data set starts in 1998 and while statistically flat has been rising at 2.27" per century. Precipitation levels in Van Nuys have averaged just 12.4" per year over this period (15.9% lower than the LA downtown 144-year average (15.9" per year)). Although generally dry, every year is characterized by a rainy season and a very dry season. The severe fire risks are there every year and this fire season was not significantly different. The minor differences are discussed on the next two slides. The slightly wetter years of 2023 and 2024 may have helped contribute to a higher fuel load that combined with the strong Santa Ana winds (a routine occurrence) to amplify the situation. These conditions are an anomaly, not 'climate change', not CO_2.

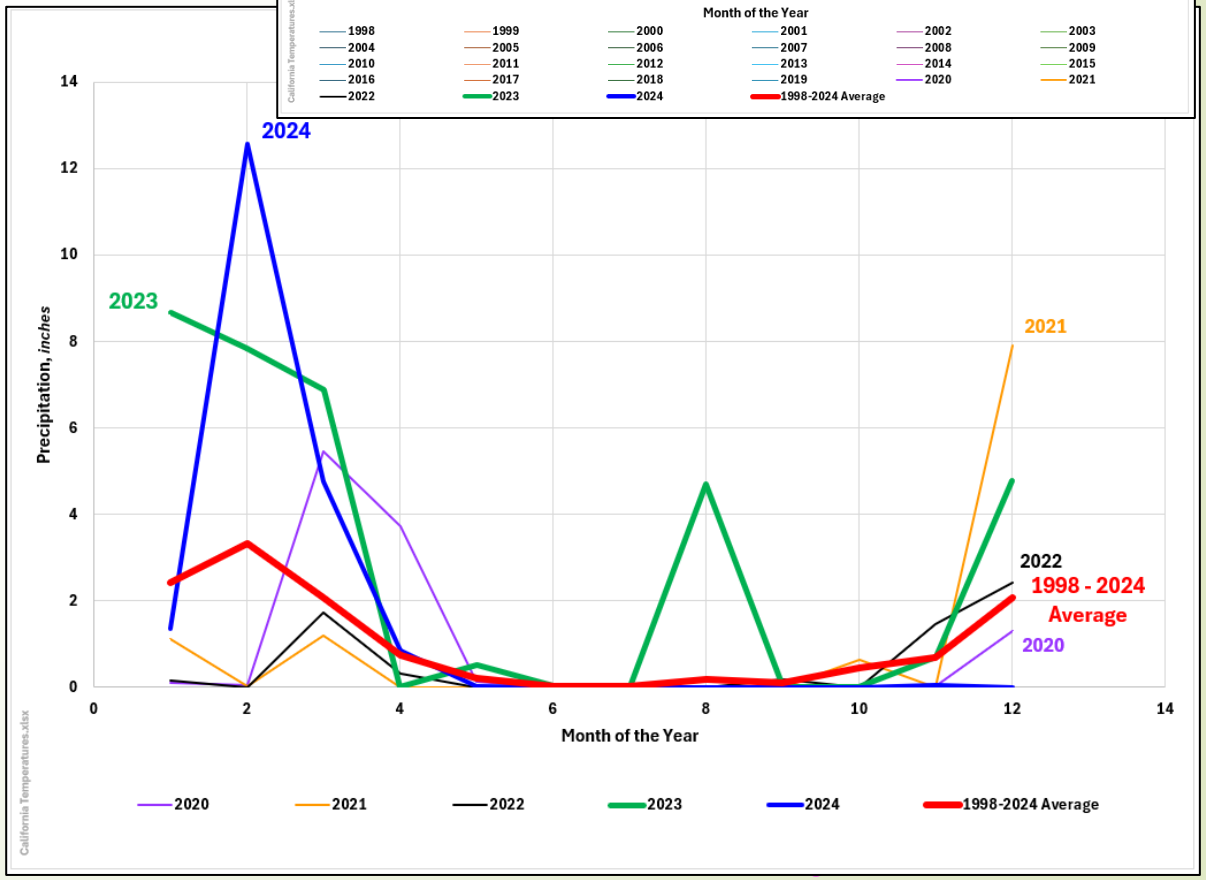
CSS-65e

Are the LA Fires Due To 'Climate Change'? Monthly Precipitation

These plots (starting to the right), overlay the yearly precipitation levels since 1998.







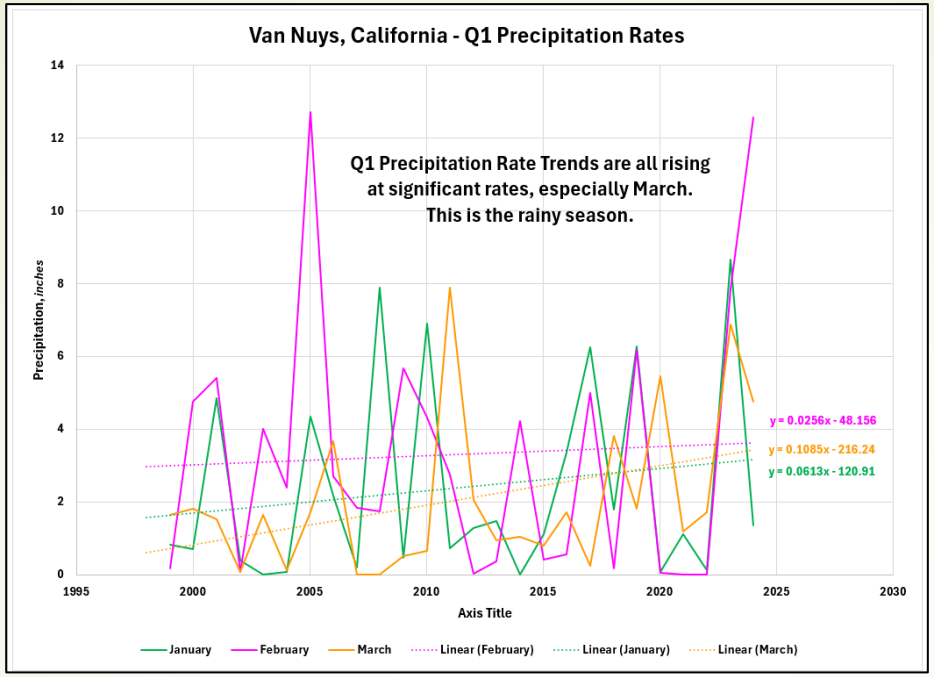
LA Fires Precipitation Yearly

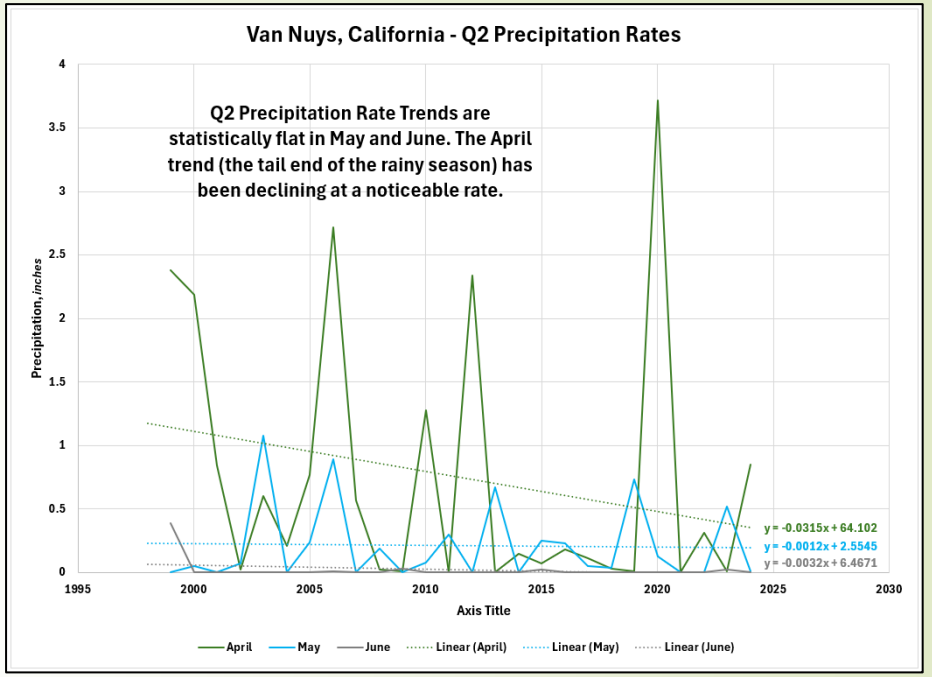
The precipitation plot above shows just the 1998 – 2024 Average plotted against the last two years (2023 and 2024). The plot to the right adds in 3 more years (2020, 2021 and 2022). Typically, May through October has little to no precipitation. Most of the rain occurs in the first quarter of the year (Q1) with minor amounts later in the year. I have seen the last two years described as an example of a hydroclimate whiplash (the latest terminology to describe the catastrophic impacts of 'climate change'). The recent atmospheric river events have delivered high precipitation levels (badly needed to address the area's high population levels and water needs) and were then followed by mostly typical extended dry periods. Precipitation from May 2024 through December 2024 was anonymously limited to trace amounts. However, that is not an isolated situation nor unprecedented. As usual, alarmists are taking an isolated event in an isolated area and trying to pretend that 'climate change' (i.e.: CO_2) is the problem. There are no historical 'hydroclimate whiplash' trends. Atmospheric rivers are not new, nor are dry spells.

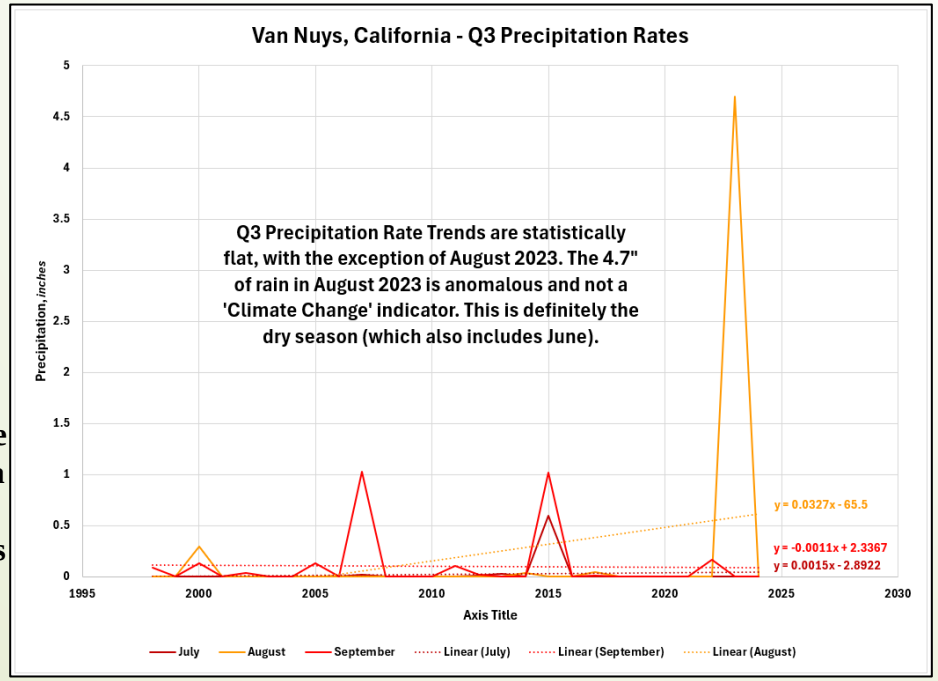
Are the LA Fires Due To 'Climate Change'? – Monthly Precipitation

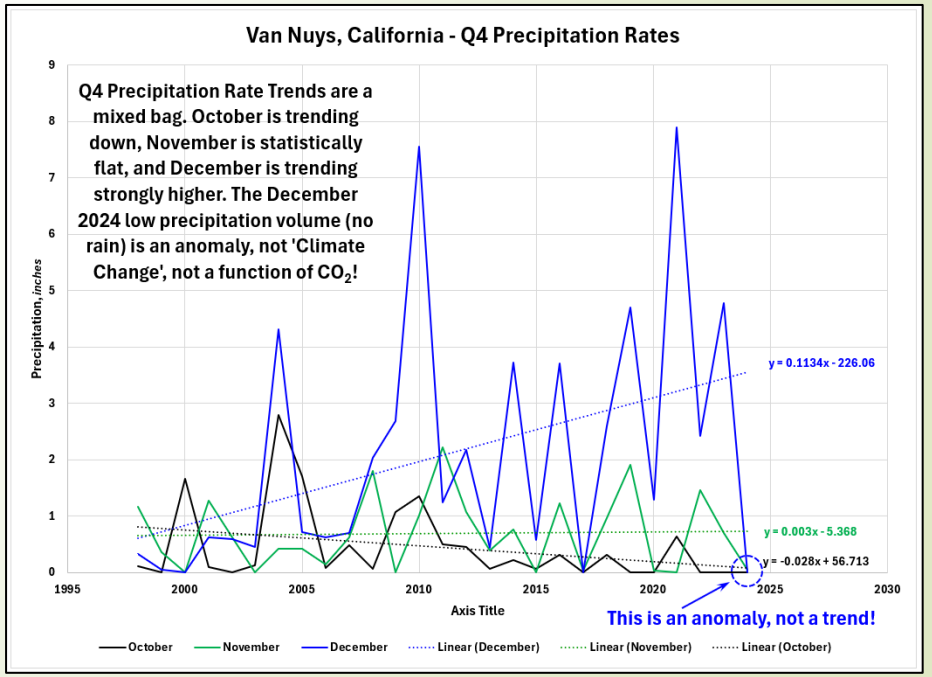
LA Fires Precipitation Monthly

Here is the same data presented in a different format. These plots show the monthly Van Nuys precipitation trends since 1998. Q1 (the rainy season) is characterized by increasing precipitation levels every month with March leading the way at +10.9" per year per century. February's increase is +2.6", March is +6.1". Q2 precipitation levels are trending down but at much lower levels than Q1 has been trending up (-3.2" for April, statistically flat for May (-0.1") and June (-0.3"). Q3 precipitation levels are statistically flat and the heart of the dry season. Even August at +3.3" is effectively statistically flat given that 2023's 4.7" yearly volume is an anomalous event. The September trend is marginally declining at -0.11", July is marginally increasing at +0.15". Q4 precipitation levels are the most relevant values to the 2025 LA fires. October levels have been trending down at -2.8" (gradually extending the dry season). November precipitation has been increasing at a modest +0.3". December (the month that is ultimately responsible for solidifying the conditions for the January 2025 fires) has been getting wetter at a +11.3" rate. Yes, there was no rain through Q4 last year, the same scenario as 2017). But that is an anomaly, not a trend, not a function of 'climate change', not a function of rising CO_2, and not "the" reason for the 2025 LA fires!



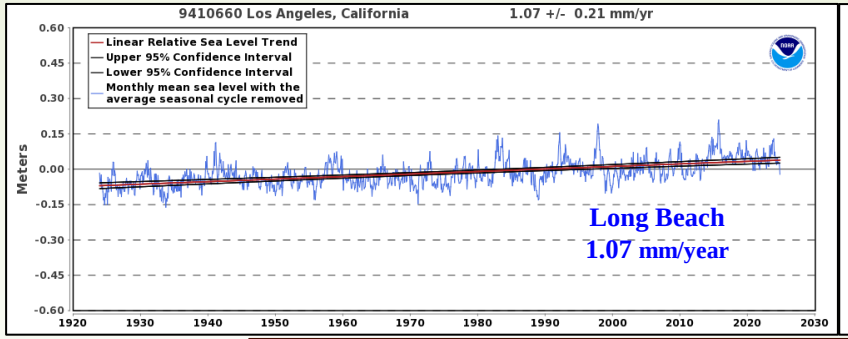


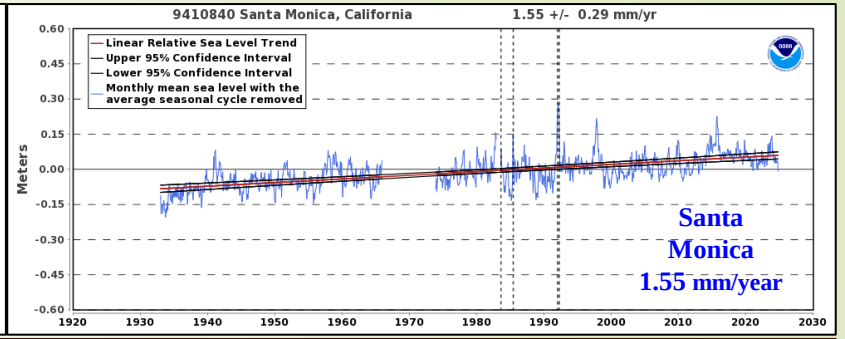


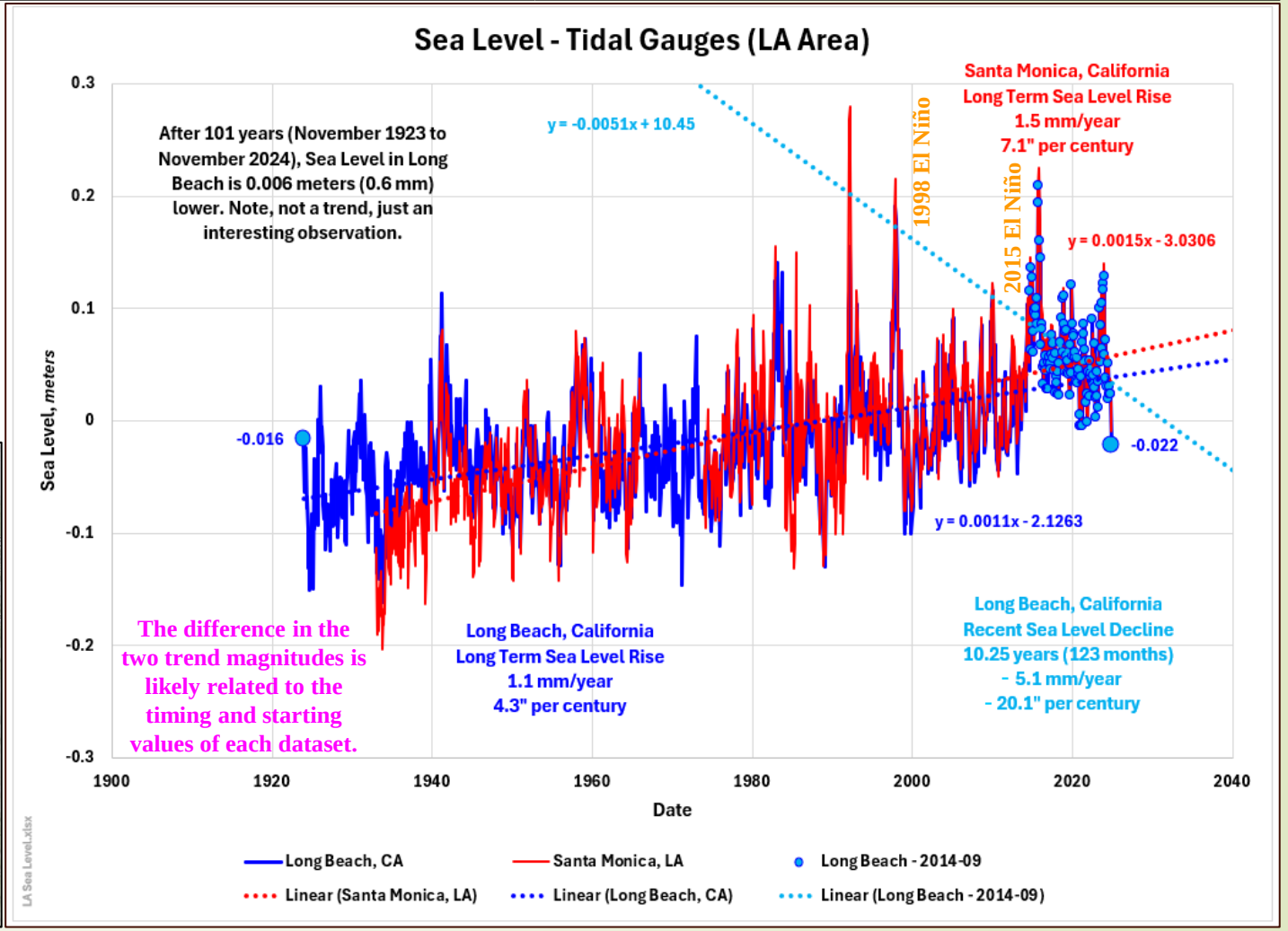


Are the LA Fires Due To 'Climate Change'? – Sea Level

While we are looking at LA 'climate change' parameters, we might as well look at Sea Level (not a direct factor in LA's fire risk but still related). As ocean temperatures rise and fall (i.e.: the Pacific Decadal Oscillation (PDO) and the El Niño Southern Oscillation (ENSO)), they have direct impacts on California's temperatures, sea levels, precipitation and ultimately fire risks. Some additional discussion can be found in my CSS-17 – Forest Fires – March 2022, OPS-33 – California Fires, and OPS-67 US-Canada – 2022 Forest Fires posts. With respect to sea level, the general story is consistent with most other tidal gauges around the world. The long-term trends are linear with short- and longer-term fluctuations above and below trend. This is also consistent with the post-1856 global averages (laid out in my CSS-47 – CO_2 and Sea Level DO NOT Correlate and CSS-61 – Sea Level and Temperature posts). There are two tidal gauge stations on the LA basin coastline (Long Beach and Santa Monica). The NOAA Tides & Currents website interpretations are included at the top of the slide. The chart to the right is the same data plotted together with some commentary. Note that sea levels have declined since the 2015 El Niño (consistent with the earlier temperature data). Strange that both temperatures and sea level data have been declining since 2015, despite the very well documented global rise in both temperature and sea level. Where are those Hottest Years EVER that we continue to hear about? To be fair 2023/24 were the warmest temperatures recorded by satellite data (but not because of CO_2 and not in LA). LA 'climate change" was minor and would have had minimal effect on LA's fire potential.







LA Fires Sea Level