

Ventura County Board of Supervisors

**SPEAKER CARD**

To address the Board of Supervisors, please fill out and submit to  
the Clerk of the Board located at the front of the hearing room.

**PLEASE PRINT – IN INK**

Meeting Date: 7/23/19

Agenda Subject: \_\_\_\_\_ Item# 8

Name: Grant Marcus

Address: \_\_\_\_\_

Organization you are representing: \_\_\_\_\_

I am IN SUPPORT or I OPPOSE this item/project. (Circle One)

## LETTER TO BOARD OF SUPERVISORS

7/23/19

I am a retired RN and first responder in the Thomas Fire. Fighting it throughout the night, I still have health problems, so I would appreciate your patience in bearing with me.

I am here before the Board today to present to you evidence of the impact of CO2 emissions from climate fires in our County, CO2 emissions that the Climate Action Plan will not consider. These are some of the highlights in the copies of the report I have given you, "Analysis: CO2 Emissions from Climate Fires in Ventura County": In 2017, the Thomas Fire was responsible for 81% of overall CO2 emissions. In 2018, the Wolsey fire was responsible for 71% of CO2 emissions. Together the two fires alone accounted for 42% of the County's CO2 emissions over the last 10 years. If you include smaller fires in that 10 year period, and fires involving structures, climate fires are more likely responsible for nearly 50% of our overall County CO2 and PM emissions.

And according to climate science and their predictions, our future is even more foreboding. We should expect much worse to come. From findings at NASA to the USGS and Union of Concerned Scientists---All indicate Ventura County will be the epicenter of "infernaos," my term combining high tornado-like winds with climate fires. The UCS says U.S. temperatures are 1.9 degrees above the base. The higher our temperatures, now 1.9 degrees above base. Higher temperatures will mean greater wind ferocity from the Santa Anas. It also means that climate fire preparation, Prevention, protection and management will be of greater importance and equal to carbon sequestration in our future, while in addition, providing security and safety to County residents.

The USGS, in its monitoring of CO2 emissions from the Wolsey Fire, indicates that climate fires involving damaged or destroyed structures yield 20% more CO2 emissions. The reason why: Homes are dense with wood and built from mature trees, which store more carbon. House Design says that each 3600 sq. foot home in the hills takes 66 mature trees to build and finish. Yet this doesn't include the concentration of consumer goods within the home, many of them toxic pollutants when set ablaze. They yield CO2 emissions but also PM10s and PM 2.5s and other particulates. And CO2 emissions don't include the CO2 emissions from home rebuilding. High-tech materials must be produced, refined, shipped, and trucked to the hills for rebuilding. And compounding climate fire is the problem the Census Bureau raises, that 53% of County residents either abut, or live within forest or chaparral zones, which now, because of climate change, are more vulnerable to fire. It should also be noted that the 1643 structures lost in the Wolsey Fire and the 1343 structures lost to the Thomas Fire, will together take nearly 200,000 mature trees to rebuild. That also means those trees that must be uprooted, milled, and trucked and will no longer be able to absorb carbon and cool our planet.

NASA, the USGS, and the UCS have made ominous predictions for California, and that we can expect larger and more fierce and frequent climate fires in the future as a result of climate change. 9 of our ten largest fires in the US and 4 of our 5 largest fires in California have occurred after 2000. In a report by the USGS, revealed on KTLA News on 7/17 of this year, the USGS predicts we can expect 100 degree temperatures or more on 100 days of the year in the "Inland Empire by mid-century.

This is where our Ana winds come from. These predictors imply Ventura County's fire season will be extended to nearly year-round, and those winds and fires will be more volatile, unpredictable, and consume much more acreage. "Infernados, like the Thomas Fire, will be a more frequent reality. It is quintessential that the Board of Supervisors determines how it will defend us, while reducing CO2 emissions caused by climate fires. We are not alone. Because of climate change, combined with deforestation, climate fires account for 25% of all global CO2 emissions, negating the carbon they store.

The Thomas and Wolsey fires that we have just experienced in the past few years is just a tip of the inferno. These indicators, along with scientific predictors leave this Board no choice but to stop doing business as usual and use drastic measures to first acknowledge, then fight CO2 emissions from climate fires. These fires, and the greenhouse gases they emit also play a key role in rising temperatures in California and around the world, and greatly effect our carbon footprint, as is evident in my findings for Ventura County.

Along with my report on climate fire emissions, as a first responder, I felt the need to present you with some solutions by way of a resolution: Refer to the title, "To Acknowledge the Carbon Impact of Recent Climate Fires..." which offers suggestions on what we can do better to Prepare, prevent, and manage our climate fires, as well as protect the people who live here.. This must be an imperative for the County to immediately consider. It is also imperative for you to particularly include CO2 emissions from climate fires into the General Plan, which designates our County's future action for the next 20 years.

To be honest, my faith in this body to be proactive has been tested again and again. When people in government turn their backs on 300 unpermitted oil wells, and they are largely fracking operations that pollute our dwindling fresh water supplies and release methane, 10x more powerful a greenhouse than CO2 emissions, there is a systemic problem that I as an outsider cannot remedy, no matter how much truth I have on my side. Along with little oversight of big oil, this body and the Climate Action Committee will not include County fossil fuel production as part of CO2 emissions. It is ignoring an elephant in the living room and then re-carpeting over it. So, in practice, to ignore the science of climate change, to carry on business as usual, as if climate fire or fossil fuel emissions didn't exist or matter, and then to ignore real corrective solutions will places all our County residents in physical danger. Inaction, or worse, special interest actions should be seen by the people of Ventura County for what they are, political terrorism, for by doing little or nothing, after distorting the data, will condemn most people in Ventura County to widespread climate fires and their devastation, health hazards and their hampering effects, the pain, suffering and trauma of fire, property losses and early deaths, etc., and condemns them for the rest of their future and for generations to come.

The unasked question of this body becomes, will the Board of Supervisors take the pledge, to act first with knowledge and conscience, and last from money and special interest, in making a future possible for the residents of Ventura County? If you choose to do little or nothing now, tomorrow, or the next general plan will be too late. Now is the time to defy political rhetoric or fluff. Now is the time to be real leaders, real visionaries, and yes, Saints, and cut through the purse strings, and use every bit

of your courage to face our climate crisis head on. The gravity of the quality of life in our County, and the survival of life on our planet requires it. I hope, for all our sakes, each one of you will rise to the occasion.

I have also done additional research over the last month and I will be updating my report to you before your next meeting..

I submit this with honesty, and also respectfully, 7/23/2019

Grant Marcus, retired RN, First Responder, and hillside resident of Ventura County, living in Ventura

# **PRELIMINARY REPORT:**

## **ANALYSIS:**

**CO<sub>2</sub>/PM EMMISIONS FROM  
CLIMATE FIRES AND THEIR IMPACT ON  
VENTURA COUNTY**

# ANALYSIS: CO2 EMISSIONS FROM CLIMATE FIRES AND THEIR IMPACT ON VENTURA COUNTY, CALIFORNIA

## HIGHLIGHTS OF THIS REPORT:

The Thomas fire accounted for about 81% and possibly more of all Ventura County CO2 emissions in 2017.

The Wolsey fire accounted for about 71% of all Ventura County CO2 emissions in 2018

CO2, CO and CH4 emissions from climate fires do not reflect the full "cascading" effect or full impact of climate fires. Emissions are the tip of the inferno.

The USGS and UCS both concur that climate change trends indicate rising County temperatures, drought, a lengthening of the fire season, an increase in wind events, leading to larger, more frequent fires in Ventura County's future.

Wildfires in Ventura County have contributed to at least 42% of CO2 emissions over the last 10 years

Climate fires doubled in size and nearly doubled in frequency since 1970 and are expected to double again by mid-century.

Because County residential areas are integrated with wildlands, more energy, firefighters, tankers, helicopters, and rebuilding costs must be considered as part of the overall CO2 / PM emissions.

Aggressive preparation, prevention, and management of wildfires will provide safety and security for County residents while being equally effective in providing carbon sequestration.

## INTRODUCTION

As I have prepared and written this report over the last several weeks, those weeks in our lives in the middle of climate change and crisis, I have been forced to pay attention to the following unprecedented natural events: For the first time in its history, India had all 30 days in June registering 100 degrees or higher; in Catalonia Spain, a first-ever red alert was decreed with 113 degrees of record-breaking heat, which self-ignited chicken manure piles, starting wildfires; Anchorage Alaska hit 90 degrees for the first time in its recorded history; a second climate-breaking heatwave in the last 3 years has just struck Quebec Canada. The first, in 2018 took 44 lives; it got so hot in Germany that speed limits had to be lowered, and Germans were warned of melting roads that were dipping and cracking. A week before I began writing, there was a regimen of tornados in Oklahoma. And only a few days ago, the USGS just predicted that the "inland empire" from Los Angeles to Bakersfield will experience 100 degree weather or greater 100 days out of the year by mid-century. And the Union of Concerned Scientists reported that although the world had temperature increases of 1.4 degrees of above base, yet US temperature increased 1.9 degrees. All those home runs we are seeing could be because of climate change (hotter lighter air, with more winds, carrying the ball farther). Higher temperatures mean more volatile extreme weather conditions and unpredictable weather patterns. Compounding this unpredictability is that it makes

climate science look faulty or uncertain, yet its overall implications, higher temperatures associated with greenhouse gases, is a certainty to which every scientist can stipulate. In the words of NASA's leading scientist, James Hansen, "We haven't had CO2 emissions like this since the Pliocene Age, 3 million years ago."

In the last 2 years of the Obama Administration, and in the first 2 years of the Trump Administration man-made CO2 emissions have been increasing. In spite of extreme weather conditions, predicted by climate science, including category 4 and 5 hurricanes that devastated Florida, Texas, and North Carolina, and droughts and fires that conflagrated California and Colorado, we have not reduced our carbon footprint and continue to march like lemmings toward business as usual. This Board of Supervisors is guilty of this endeavor, looking the other way on over 300 fracked wells if failed to permit. The methane emissions from these wells produce greenhouse gasses 10 times more potent than CO2. As the Board warns us about drought, it allows oil companies to use a million gallons of water every day per well, at no cost, in order to keep fracking for oil, which is the bigger part of our problem. Meanwhile the General Plan Committee and particularly, the Climate Action Plan Committee will not consider fossil fuel production as part of our CO2 emissions. In other words, the very local leaders who criticize our president, and who are supposed to be smart enough to protect our community, have become proverbial ostriches, burying their heads of denial in the fracked sand. It makes this researcher wonder if scientific information will be taken seriously by this body. Will this body support the Climate Action Plan Committee by being inclusive of ALL CO2 emissions, even if they come from deep pockets that bribe them? And will they fund the Committee to educate the public with their findings? Without education, there is little hope people will change, because the public cannot possibly act on something they do not know, and which had been censored from them.

It is important to be accurate in including all CO2 emissions, if we are to really do something significant about climate crisis. Just as it is important to include fossil fuel production as part of our overall CO2 emissions, it is also important to include CO2 emissions from our climate fires, which are predicted to become larger, more intense, and more frequent in the coming years. So It may interest you to know the statistics I have gathered regarding the percentages of CO2, PM-10, PM2.5, from our recent climate fires of 2017 and 2018 in Ventura County. As you will be able to see, it is important to consider CO2 emissions and micro-particulate emissions from climate wildfires, as both contribute to a hotter planet.

My sources for this study include, but are not limited to: The California Air Resources Board climate data; the Climate Action Plan; the book, THE UNINHABITABLE EARTH by David Wallace-Wells, THE END OF ICE by Dar Jamail; the U.S. Census Bureau, two reports by the Union of Concerned Scientists, the USGS, the Washington Times, KTLA News, NASA's Director of climate research, arid biologist, farmer, instructor, and adviser James Fleck of Fresno California.

## **II FINDINGS FROM THE AIR RESOURCES CONTROL BOARD**

According to the California Air Resources Board, CO2 emissions in California make up 83% of our total man-made greenhouse gases.

The good news is this. Although Ventura is approximately 1.1% of California land mass, it only accounts for about 0.4% of its manmade CO2 emissions. California had 429.4 million metric tons of CO2 in 2015, but Ventura County only had 1,856,804 mmttons of CO2, rather than the presumed 4.29mmttons. (See 2040 pie chart, how this manmade use is broken down; and B-7 of the Climate Action Plan--CAP-- for the amount). Ventura County is actually doing better than the rest of the State in CO2 emissions. The good news stops here, as our climate fires, the Thomas and Woolsey Fires, more than made up for our lower than average California manmade CO2 output. And the two fires alone account for 42% of Ventura County's overall emissions over the last 10 years.

Because of structural involvement in both fires, and because of the density of materials in the average hillside home, as well as the concentration of its contents, more emissions are the result. USGS studies, which followed the CO2 emissions of the Woolsey Fire, indicate that there is an increase of 20% more CO2 emissions in a combined wildland and structural climate fire. Further, because of the various high tech materials involved in the making and furnishing of a home, there is not only greater CO2 emissions, but CO, CH4, PM 25 and PM10 emissions as well. These products, according to the Union of Concerned Scientists, heat the air, effect ozone layers, and increase pollution hazards that directly effect the public health of our Ventura County Community. It is for this and other reasons that the report suggests preparation, prevention and management of wildland fires, is essential in reducing CO2 emissions, PM emissions, and various other structure fire particulates that will also contribute to climate change. Keep in mind that once these emissions are released, they will not go away. They are cumulative, much like radiation is cumulative.

Unfortunately, wildland fires involving structural involvement is a fairly new phenomenon. There have been no specific studies that I could find that directly compare emissions from wildland fires to those of wildland fires and conjunctive structural damage and destruction. The preeminent reason why is that we are just beginning to fully understand the impact of our rising CO2 emissions, and their related carbon footprint in terms of higher temperatures and exactly how rising temperatures will affect different regions of the world. And our developing understanding of climate change comes at a time when the global population has not only increased in numbers and emissions, but has also increased in movement, integrating into wildland areas. Populations have burgeoned into the wildlands, while our CO2, CO, CH4, and PM emissions have left the places we have chosen to live more vulnerable to the effects of climate change.

Without specific scientific studies, we can, through common sense and physical experience, still derive plausible theories regarding increased emissions from burning dense structures, containing concentrations of a wide variety of products, just as

science has deduced that with higher temperatures, there are lengthening fire seasons, and more volatile fires and higher winds attributed to warmer air. We can clearly see how climate fires are exacerbated by weather-stressed trees and chaparral, that dry out as soil dries out, and become infested with beetles and other environmental hazards associated with higher temperatures. We can clearly see how it leaves homes and other structures we build within natural settings more vulnerable to climate fires. And how those homes can increase the overall CO2 emissions, as well as other emitters as they burn within the fire.

And we can also see logically how structural involvement in wildland climate fires can increase the content of CO2 emissions, as well as many other emissions and pollutants. We can physically see the dense materials in a man-made structure, as well as its many contents. In an article in "House Designer" magazine titled, "How Many Trees Does It Take to Build a House?" the article scientifically breaks down a tree into board feet and calculates the wood needed per square foot of home. The article concludes that in the average size hillside house of 3600 square feet, 33 mature trees are needed to build one home plus garage. But this does not include wood flooring, wood cabinets, or wood furnishings of the home, which the article maintains doubles the amount of trees needed. So just in wood alone, It takes 66 mature trees to build and furnish one home in the Ventura hills. Considering our County lost 1212 structures in the Thomas fire of 2017, and another 1543 structures in the Wolsey Fire of 2018, together we also lost 181,830 mature trees, which spread their stored CO2 into the air.

So while these structures burn and emit CO2 and other pollutants, rebuilding will require the uprooting, milling, and transportation by truck of nearly 200,000 mature trees. This will cause its own CO2 emissions. And by needing more trees for rebuilding, those trees we cut down can no longer assist us in absorbing CO2 and re-cleansing the air and the earth, and keeping the environment cooler for us, which is what trees do.

Although I give emphasis to the wood required in rebuilding, other materials in the home, which must be replaced, also produce CO2 emissions. Concrete, glass, metal, stone, asphalt shingles, tile, wiring, sheetrock, plastics and glass, much of which is required in rebuilding, and which many are high-tech materials, and through their manufacturing, release their own CO2 emissions. And many of these products must also be refined, shipped and transported, at great distance, causing the release of more emissions that will effect our climate.

It is also noteworthy that many of these products, because of being a limited resource, are more costly every year to produce. And in terms of the wood we use, in extreme weather conditions and higher temperatures, the wood of trees becomes more stressed, and in drier conditions the wood is weakened, and more beetle-infested, and therefore, it becomes more difficult and costly to replenish these trees, naturally or artificially, than it used to be. And more of the finished product no longer meets the standards we need, so it takes more trees to equal the same board feet.

In fact, as discussed in THE UNINHABITABLE EARTH, science has shown that there is such a dramatic increase in wildfires that our forests have been turned from

CO2 absorbers to CO2 emitters. Another effective CO2 absorber are our oceans. However, higher temperatures are also problematic for our oceans. Our oceans store over half our CO2 emissions; but as they become more acidic with rising temperatures, their ability to store CO2 diminishes. This new lack of absorption, from sea to tree, compounds our continued production of man-made CO2 emissions.

With rising CO2 emissions, together with falling CO2 absorption, it becomes that much more crucial to prepare for, prevent, and manage our climate fires, simply because it means that this synergistic effect will bring us to the brink of climate crisis much faster than we think. Or, as a university professor, Dr. Nate Stephenson of the USGS concludes, in *THE END OF ICE*: "We know we are going to get hammered with surprises, as the climate keeps changing...And that's only rocket science. The world is far more complex." It calls for all of us to step up and aggressively acknowledging the future impact of climate fires, and have the courage to be equally aggressive in curtailing oil production, applying much stricter regulations for utilities, establishing the inclusion of fire lines and fire breaks, specifically where residential development meets forest and chaparral, and in spite of the collision of politics, have the audacity to invest in intensive education on climate change so homeowners will readily comply with necessary additional restrictions on landscape designs, as well as plant management that includes fire-resistant shrubs and trees that will possibly prevent fires, protect homes, which will slow climate change and eventually help the acidity of our lakes and streams, and reduce structural damage and our the need to cut down more trees for rebuilding.

In light of the developing climate science, and the trends / predictions that sometimes fail to keep up with climate change, which is indicative of a faster- than-predicted changing climate, preparation, prevention and management of our ever-expanding fire seasons is critically needed. We need to act as visionaries. Our survival will depend on it.

Consider this: It was announced on KTLA News 7/17/19 that the USGS has just predicted that by mid-century, Los Angeles will have 25 days a year of temperatures higher than 100 degrees. And more important to Ventura County, and the Santa Ana wind cycle, the USGS has also predicted that the "inland empire" will have 100 days of temperatures above 100 degrees. If these predictions are realized, what will that mean in terms of high wind events and their frequency? How will this extend our already expanding fire season? In what ways will this effect our drier soil and the tinder or kindling it creates to potentiate more fires? What will this do to the air, the marine layer we depend on for cooling, and our public health? The General Plan, that prepares us for the next 20 years, must include the ramifications of our lengthening fire seasons and more severe climate fires to come, which will be an integral part of our County's future. Our County must stay ahead of predictions that climate science has already proven behind on. The Thomas and Wolsey fires were examples of the new norm, of bigger, more frequent firestorms or 'infernaoes' we must prepare ourselves for. The USGS is predicting that by 2075 - close to the 21st century, the inland empire will have 200 days out of the year of 100 degrees or greater. (At least one in every two days over

100 will be the Santa Ana wind's future--and ours)..For some of us, those catastrophic temperatures are only grandchildren away.

### **III THE THOMAS FIRE AND CO2 EMISSIONS**

By taking the average man-made CO2 emissions from 2015, and applying that to our climate fires in 2017 and in 2018, the following was observed:

Although totals for California of 429.4 million metric tons of CO2 were manmade emissions that came from transportation, industry, etc, in 2015 (and maybe a fraction higher today). 36.7 mmttons of CO2 came from climate wildfires or nearly 8% of overall CO2 emissions in 2017. A year later it was higher at nearly 10%. The US Geological Survey disputes CARB and claims that wildfires accounted for 15% of all CO2 emissions in 2018. (Washington Times). Although this amount does not compare to overall man-made emssions, CO2 emissions from wildfires have been concentrated in Ventura County over the last 2 years; and according to climate science projections, climate fires will continue to escalate in our County.

Climate fires in 2017 burned 1.34 million acres in California, releasing 36.7 million metric tons of CO2. The Thomas Fire and smaller brush fires in the county attributed to 23% of 36.7 million metric tons of CO2, or 8.44 million metric tons of CO2.\* Considering that only 1.857 mmttons of CO2 were released in 2015 in Ventura County; and if we generously rounded that up to 2.0mmttons released in 2017, the Thomas Fire still accounts for 4.4 times that amount, or 81% of Ventura County CO2 emissions for 2017. (Sources: California Air Resources Board; greenhouse gas emissions, man-made & wildfire emissions, 2019; & The Climate Action Plan, May 20, 2019, B-7). This is the approximate CO2 emissions released by climate fires in comparison to man-made industrial, transportation, off-road equipment, water/waste-water, etc. (CAP).

### **IV THE WOLSEY FIRE AND EMISSIONS**

In 2018, we had the Wolsey Fire. 1.59 million acres of wildfire happened in California in 2018. The Wolsey Fire and smaller brush fires in the County accounted for approximately 10% of California climate burning. 128,000 acres burned in the Wolsey Fire alone. 45.5 mmttons of climate fire CO2 was emitted in California in 2018, and Ventura County accounted for 11

Also measured by the California Air Resources Board were particulate matter emissions (PM-10 and PM 2.5). These are micro particulates emitted. In Ventura County, the Thomas Fire was responsible for 23% of 469 thousand tons of PM-10 or 107,720 tons of PM-10 emissions. It also accounted for 23% of 397 thousand tons of PM-2.5 micro particulates or 91,910 tons of PM-2.5. (Micro particulates also affect climate change and warming trends). (CARB greenhouse data, 2019)

In 2018, the Wolsey and smaller brush fires accounted for 11% of PM-10 and PM2.5 micropollutants. PM-10 emissions from Ventura County climate fires were

59,800 tons in 2018. And PM2.5 micropollutants totaled 50,700 tons. (CARB greenhouse data 2019).

Because over 1343 structures were burned or damaged by the Thomas Fire (Wikipedia) HFC and SFC emissions were likely off the charts compared to normal man-made releases. The Woolsey Fire not only killed 3 people, but it burned 1643 structures. (Wikipedia). If we give some time to think of the makeup and contents of each structure, the hydrofluorocarbons, octafluoropropanes, nitrous oxides, hydrocarbons, methane, hexafluorides and other emissions contained--(which has not been measured by Air Resources, nor the County)...For example, the Thomas Fire hit several farms. Was there manure on the farms? What was the content in the structures hit by the Thomas and Woolsey fires? \*A personal side note: a neighbor's shed blew up in the fire directly behind my house, containing oil products, insecticides, various aerosols and 12 old tires. What were the emissions? (The shed, by the way, was too small to be counted as a structure) --which begs the question, how many emissions are we missing?

According to the U.S. Census Bureau, Our County is 53% natural forest. Scientific projections indicate that due to climate warming, now at 1.4 degrees above base temperature (Intergovernmental Panel on Climate Change--IPCC--2018) there will be a climate fire in Ventura County every 7 years (Wallace-Wells, pp70-77). Since the General 20-Year Plan will go into effect a year following the Woolsey Fire, this means we can expect 3 climate fires in Ventura County within the next 20 years. By 2040, our manmade CO2 emissions will be close to 2.0 mmttons per year. If we average the percentages of the Thomas Fire (23%) and the Woolsey Fire (11%) and project a climate fire every 7 years that averages 17% of overall California CO2 emissions--- Then we average the last 12 years of wildfire CO2 emissions for California (21.6mmttons); and we multiply that figure by 1.5 (Science has projected that wildfire landmass will double by 2050--Wallace-Wells) there will be on average 32.4mmttons of CO2 from wildfires--climate fires--every year. One fire every 7 years in Ventura County will emit (.17 X 32.4) or 5.51mmttons of CO2 from wildfires. There will be 3 fires, so multiply that amount by 3 X 5.51 or 16.5 mmttons of CO2 over the 20 years of the General Plan. Even if we take the 2.0mmttons of manmade CO2 (the top figure not realized until 2040 under CAP), manmade CO2 will be 40mmttons over the next 20 years, and climate fires will conservatively deliver 16.5mmttons of CO2, 29.2%, or nearly 30% of the additional CO2 in Ventura County's overall CO2 emissions for the next 20 years of the General Plan. It is important to note that the CO2 output from climate fires in Ventura County has been much higher than that over the last 10 years.

## V CONCLUSION

You can see the sizable effects of California climate fires in determining greenhouse gas emissions for Ventura County, and it shows how crucial it is for us to better prepare for, find preventative measures for, and provide better management for our climate fires in the near future. Doing so could dramatically reduce our carbon footprint. Predictions

from top scientific organizations on climate crisis only confirm a foreboding prognosis for Ventura County. It is imperative that we must act on the preparation, prevention, and management of our climate fires, as they can be as effective a tool as carbon sequestration itself. Maybe, in our future, even more so.

I hope this has some bearing on your consideration when including Ventura County wildfires (climate fires) as part of the CO2 emissions in the Climate Action Plan. Considering that landmass consumed by California climate fires has doubled since 1970 and will double again by 2050, that California has had 4 of its 5 largest fires in history in the new millennium, and that it has been projected that California Counties will experience climate fires every 7 years, climate fires will have even greater impact in our greenhouse gas output in the future. And so it becomes an even greater necessity that climate fires be included in the Climate Action Plan, as well as part of the General 20-year Plan. We simply cannot avoid the reality of a hotter planet and its cyclical effects of drought, rain and fire.

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\* The 23% was derived by dividing the overall acreage burned in California into the acreage burned just in Ventura County, deriving the percentage. Thomas Fire and minor brush fires: 1,340,000 total CA acreage burned in 2017 divided into 300,000 acres burned in Ventura County = 23%. Wolsey Fire: 1,590,000 total acreage burned in CA in 2018, divided into Wolsey Fire plus minor brush fires, 159,000 acres = 10-11%. This percentage was then multiplied to the total CO2 emissions for CA: In 2017, there were 36.7mmtons of wildfire CO2 emitted in CA, of which 23% came from Ventura County:  $.23 \times 36.7 = 8.441$ ; In 2018, there were 45.5mmtons of CO2 from wildfires, and 10% came from Ventura county:  $.10 \times 45.5 = 4.5$ . This figure was then readjusted to include input from the USGS; and the percentage was readjusted to 5.0. The 1,856,804 CO2 figure was then rounded up to 2,000,000 to consider the possibility of greater carbon emissions 2 years later than 2015 (or CAP's 2040 projections). The result is that in 2017, climate fires conservatively accounted for 80.8% (81%) of CO2 emissions; and in 2018, accounted for 71% of CO2 emissions.

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2019 California Air Resources Board data

2019 Climate Action Plan data

Washington Times, "Disastrous California Wildfire Emitted as Much Carbon as a Year's Worth of Electricity," Valerie Richardson; review of 2018 Wolsey fire studies by the US Geological Survey.

NASA arial views of CO2 emissions; NASA Earth Observatory;

Jason Funk, UCS, "How Climate Chage Is Increasing Forest Fires Around the World. 2018;

Rutgers University, "What You Need to Know about the Latest U.N. Climate Change Report," Carol Peters, 11/14/18;

Wikipedia, Thomas and Wolsey Fires.

Wallace-Wells, David, *The Uninhabitable Earth*; 2019.

Fire Captain's Report, "The California Soberanes Fire;"

Liu, Yongqiang, Wildland fire emissions, carbon, and climate: Wildfire-climate interactions--abstract by Yongqiang Liu, Forest Ecology and Management, vol.317, 4/1/14, pp80 - 96

Consult: Jim Fleck, biologist, teacher, grape farmer, Fresno, CA.

KTLA News, 7/17/19--on USGS predictions for Southern California;

House Design: "How Many Trees Does It Take to Build a House?" --Internet

Union of Concerned Scientists, "Playing with Fire," pdf file, internet download.

\*(Grant Marcus is a Retired Registered Nurse, with a Masters in English, and a first responder in the Thomas Fire. He has written several articles on energy, and has had some published by the Independent of Santa Barbara, as well as the VC Reporter. Lengthy articles included analysis of the Fukushima nuclear disaster and problematic issues with hydraulic fracturing and other intense drilling technologies. He is a resident in the hills of Ventura, where he fought the Thomas Fire throughout the night; saving homes, including his own, and still suffers health problems from the fire).

## **APPENDIX A**

**"WILDFIRE"—PP 70-77**

*from THE UNINHABITAL EARTH*

---David Wallace-Wells

# Wildfire

more fireplaces

THE TIME BETWEEN THANKSGIVING AND CHRISTMAS IS meant to be, in Southern California, the start of rainy season. Not in 2017. The Thomas Fire, the worst of those that roiled the region that fall, grew 50,000 acres in one day, eventually burning 440 square miles and forcing the evacuations of more than 100,000 Californians. A week after it was sparked, it remained, in the ominous semi-clinical language of wildfires, merely "15% contained." For a poetic approximation, it was not a bad estimate of how much of a handle we have on the forces of climate change that unleashed the Thomas Fire and the many other environmental calamities for which it was an apocalyptic harbinger. That is to say, hardly any. *The Fire Disrupted by 3 weeks of rain* *was a good fire in California* Didion wrote in "Los Angeles Notebook," collected in *Slouching Towards Bethlehem*, published in 1968. But the cultural impression is apparently not all that deep, since the fires that broke out in the

fall of 2017 produced, in headlines and on television and via text messages, an astonished refrain of the adjectives "unthinkable," "unprecedented," and "unimaginable." Didion was writing about the fires that had swept through Malibu in 1956, Bel Air in 1961, Santa Barbara in 1964, and Watts in 1965; she updated her list in 1989 with "Fire Season," in which she described the fires of 1968, 1970, 1975, 1978, 1979, 1980, and 1982: "Since 1919, when the county began keeping records of its fires, some areas have burned eight times."

The list of dates cautions, on the one hand, against wildfire alarmism—against a sort of cartoonishly Californian environmental panic, in which all observers are all-consuming by the present instance of disaster. But all fires are not equal. Five of the twenty worst fires in California history hit the state in the fall of 2017, a year in which over nine thousand separate ones broke out, burning through more than 1,240,000 acres—nearly two thousand square miles made soot. *And it all happened in the state of California*

That October, in Northern California, 172 fires broke out in just two days—devastation so cruel and sweeping that two different accounts were published in two different local newspapers, of two different aging couples taking desperate cover in pools as the fires swallowed their homes. One couple survived, emerging after six excruciating hours to find their house transformed into an ash monument; in the other account, it was only the husband who emerged, his wife of fifty-five years having died in his arms. As Americans traded horror stories in the aftermath of those fires, they could be forgiven for mixing up the stories, or being confused; that climate terror could be so general as to provide variations on such a theme had seemed, as recently as that September, impossible to believe.

The following year offered another variation. In the summer of 2018, the fires were fewer in number, totaling only six thousand. But just one, made up of a whole network of fires together called the Mendocino Complex, burned almost half a million acres alone. In total, more than two thousand square miles in the state turned

to flame, and smoke blanketed almost half the country. Things were worse to the north, in British Columbia, where more than three million acres burned, producing smoke that would—if it followed the pattern of previous Canadian plumes—travel across the Atlantic to Europe. Then, in November, came the Woolsey Fire, which forced the evacuation of 170,000, and the Camp Fire, which was somehow worse, burning through more than 200 square miles and incinerating an entire town so quickly that the evacuees, 50,000 of them, found themselves sprinting past exploding cars, their sneakers melting to the asphalt as they ran. It was the deadliest fire in California history, a record that had been set almost a century before, by the Griffith Park Fire of 1933.

If these wildfires were not unprecedented, in California at least, what did we mean when we called them that? Like September 11, which followed several decades of morbid American fantasies about the World Trade Center, this new class of terror looked to a horrified public like a climate prophecy, made in fear, now made real.

That prophecy was threefold. First, the simple intuition of climate horrors—an especially biblical premonition when the plague is out-of-control fire, like a dust storm of flame. Second, the expanding reach of wildfires in particular, which now can feel, in much of the West, only a gust of bad wind away. But perhaps the most harrowing of the ways in which the fires seemed to confirm our cinematic nightmares was the third: that climate chaos could breach our most imperious fortresses—that is, our cities.

With Hurricanes Katrina, Sandy, Harvey, Irma, and Michael, Americans have gotten acquainted with the threat of flooding, but water is just the beginning. In the affluent cities of the West, even those conscious of environmental change have spent the last few decades walking our street grids and driving our highways, navigating our superabundant supermarkets and all-elsewhere internet and believing that we had built our way out of nature. We have not. A paradise dreamscape erected in a barren desert, L.A. has always been an impossible city, as Mike Davis has so brilliantly

written. The sight of flames straddling the eight-lane I-405 is a reminder that it is still impossible. In fact, getting more so. For a time, we had come to believe that civilization moved in the other direction—making the impossible first possible and then stable and routine. With climate change, we are moving instead toward nature, and chaos, into a new realm unbounded by the analogy of any human experience.

TWO BIG FORCES CONSPIRE TO PREVENT US FROM NORMALIZING fires like these, though neither is exactly a cause for celebration. The first is that extreme weather won't let us, since it won't stabilize—so that even within a decade, it's a fair bet that these fires, which now occupy the nightmares of every Californian, will be thought of as the "old normal." The good old days.

The second force is also contained in the story of the wildfires: the way that climate change is finally striking close to home. Some quite special homes. The California fires of 2017 burned the state's wine crop, blowtorched million-dollar vacation properties, and threatened both the Getty Museum and Rupert Murdoch's Bel-Air estate. There may not be two better symbols of the imperiousness of American money than those two structures. Nearby, the sunshiny children's fantasia of Disneyland was quickly canopied, as the fires began to encroach, by an eerily apocalyptic orange sky. On local golf courses, the West Coast's wealthy still showed up for their tee times, swinging their clubs just yards from blazing fires in photographs that could not have been more perfectly staged to skewer the country's indifferent plutocracy. The following year, Americans watched the Kardashians evacuate via Instagram stories, then read about the private firefighting forces they employed, the rest of the state reliant on conscripted convicts earning as little as a dollar a day.

By accidents of geography and by the force of its wealth, the United States has, to this point, been mostly protected from the

the author has written 13 chapters to book 2056.

devastation climate change has already visited on parts of the less-developed world—mostly. The fact that warming is now hitting our wealthiest citizens is not just an opportunity for ugly bursts of liberal schadenfreude; it is also a sign of just how hard, and how indiscriminately, it is hitting. All of a sudden, it's getting a lot harder to protect against what's coming.

What is coming? Much more fire, much more often, burning much more land. Over the last five decades, the wildfire season in the western United States has already grown by two and a half months; of the ten years with the most wildfire activity on record, nine have occurred since 2000. Globally, since just 1979, the season has grown by nearly 20 percent, and American wildfires now burn twice as much land as they did as recently as 1970. By 2050, destruction from wildfires is expected to double again, and in some places within the United States the area burned could grow fivefold. For every additional degree of global warming, it could quadruple. What this means is that at three degrees of warming, our likely benchmark for the end of the century, the United States might be dealing with sixteen times as much devastation from fire as we are today, when in a single year ten million acres were burned. At four degrees of warming, the fire season would be four times worse still. The California fire captain believes the term is already outdated: "We don't even call it fire season anymore," he said in 2017. "Take the 'season' out—it's year-round."

But wildfires are not an American affliction; they are a global pandemic. In icy Greenland, fires in 2017 appeared to burn ten times more area than in 2014; and in Sweden, in 2018, forests in the Arctic Circle went up in flames. Fires that far north may seem innocuous, relatively speaking, since there are not so many people up there. But they are increasing more rapidly than fires in lower latitudes, and they concern climate scientists greatly: the soot and ash they give off can land on and blacken ice sheets, which then absorb more of the sun's rays and melt more quickly. Another Arctic fire broke out on the Russia-Finland border in 2018, and smoke

from Siberian fires that summer reached all the way to the mainland United States. That same month, the twenty-first century's second-deadliest wildfire had swept through the Greek seaside, killing ninety-nine. At one resort, dozens of guests tried to escape the flames by descending a narrow stone staircase into the Aegean, only to be engulfed along the way, dying literally in each other's arms.

The effects of these fires are not linear or neatly additive. It might be more accurate to say that they initiate a new set of biological cycles. Scientists warn that, even as California is baked into brush by a drier future, making inevitable more and more damaging fires, the probability of unprecedented-seeming rainfalls will grow, too—as much as a threefold increase of events like that which produced the state's Great Flood of 1862. And mudslides are among the clearest illustrations of what new horrors that herald; in Santa Barbara that January, the town's low-lying homes were pounded by the mountains' detritus cascading down the hillside toward the ocean in an endless brown river. One father, in a panic, put his young children up on his kitchen's marble countertop, thinking it the strongest feature of the house, then watched as a rolling boulder smashed through the bedroom where the children had been just moments before. One kindergartner who didn't make it was found close to two miles from his home, in a gulley traced by train tracks close to the waterfront, having been carried there, presumably, on a continuous wave of mud. Two miles.

Each year, globally, between 260,000 and 600,000 people die from smoke from wildfires, and Canadian fires have been linked to spikes in hospitalizations as far away as the Eastern Seaboard of the United States. Drinking water in Colorado was damaged for years by the fallout from a single wildfire in 2002. In 2014, Canada's Northwest Territories were blanketed with wildfire smoke, producing a 42 percent spike in hospital visits for respiratory ailments and what one study called a "profound" negative effect on individual well-being. "One of the strongest emotions that

people felt was isolation," the lead researcher later said. "There's a sense of not being able to get away. Where do you go? There's smoke everywhere."

WHEN TREES DIE—BY NATURAL PROCESSES, BY FIRE, AT THE hands of humans—they release into the atmosphere the carbon stored within them, sometimes for as long as centuries. In this way, they are like coal. Which is why the effect of wildfires on emissions is among the most feared climate feedback loops—that the world's forests, which have typically been carbon sinks, would become carbon sources, unleashing all that stored gas. The impact can be especially dramatic when the fires ravage forests arising out of peat. Peatland fires in Indonesia in 1997, for instance, released up to 2.6 billion tons of carbon—40 percent of the average annual global emissions level. And more burning only means more warming only means more burning. In California, a single wildfire can entirely eliminate the emissions gains made that year by all of the state's aggressive environmental policies. Fires of that scale happen now every year. In this way, they make a mockery of the technological, meliorist approach to emissions reduction. In the Amazon, which in 2010 suffered its second "hundred-year drought" in the space of five years, 100,000 fires were found to be burning in 2017.

At present, the trees of the Amazon take in a quarter of all the carbon absorbed by the planet's forests each year. But in 2018, Jair Bolsonaro was elected president of Brazil promising to open the rain forest to development—which is to say, deforestation. How much damage can one person do to the planet? A group of Brazilian scientists has estimated that between 2021 and 2030, Bolsonaro's deforestation would release the equivalent of 13.12 gigatons of carbon. Last year, the United States emitted about 5 gigatons. This means that this one policy would have between two and three times the annual carbon impact of the entire American econ-

omy, with all of its airplanes and automobiles and coal plants. The world's worst emitter, by far, is China; the country was responsible for 9.1 gigatons of emissions in 2017. This means Bolsonaro's policy is the equivalent of adding, if just for a year, a whole second China to the planet's fossil fuel problem—and, on top of that, a whole second United States.

Globally, deforestation accounts for about 12 percent of carbon emissions, and forest fires produce as much as 25 percent. The ability of forest soils to absorb methane has fallen by 77 percent in just three decades, and some of those studying the rate of tropical deforestation believe it could deliver an additional 1.5 degrees Celsius of global warming even if fossil fuel emissions immediately ceased.

Historically, the emissions rate from deforestation was even higher, with the clearing of woods and flattening of forests causing 30 percent of emissions from 1861 to 2000; until 1980, deforestation played a greater role in increases of hottest-day records than did direct greenhouse-gas emissions. There is a public health impact as well: every square kilometer of deforestation produces twenty-seven additional cases of malaria, thanks to what is called "vector proliferation"—when the trees are cleared out, the bugs move in.

This is not simply a wildfire phenomenon; each climate threat promises to trigger similarly brutal cycles. The fires should be terrifying enough, but it is the cascading chaos that reveals the true cruelty of climate change—it can upend and turn violently against us everything we have ever thought to be stable. Homes become weapons, roads become death traps, air becomes poison. And the idyllic mountain vistas around which generations of entrepreneurs and speculators have assembled entire resort communities become, themselves, indiscriminate killers—and are made, with each successive destabilizing event, only more likely to kill again.

A  
**RESOLUTION**  
AS  
PART  
OF  
THE  
**SOLUTION**

RESPONSE TO THE CLIMATE ACTION PLAN:

THE URGENCY AND DUTY OF THE VENTURA COUNTY PLANNING COMMISSION TO INCLUDE THE CARBON IMPACT OF CLIMATE FIRES AS PART OF THE EMISSIONS IN THE CLIMATE ACTION PLAN;

AND TO USE FIRE PREPAREDNESS, PREVENTION, AND THE MANAGEMENT OF CLIMATE FIRES AS PART OF THE EFFORT TO LOWER OVERALL VENTURA COUNTY CARBON EMISSIONS

CONTENTS:

1. Proposed Planning Commission Resolution: To acknowledge the Carbon Impact of Recent Climate Fires, and to Reduce Climate Change and Ventura County's carbon Footprint by Investing in Better Preparation, Prevention and Management of Climate Fires; and Through Resolution to Include This Process Within the Climate Action Plan
2. Personal Cover Letter to the Climate Action Plan, CC Planning Commission, CC Board of Supervisors,

"Will the Planning Commission pledge to work first from the influence of conscience, and last from the influence of money to prevent even more deadly climate disasters? This is the question..."

Grant Marcus,  
Retired Registered Nurse, Thomas Fire First Responder, and Ventura Hillside Resident

## COUNTY PLANNING COMMISSION RESOLUTION

THE COUNTY PLANNING COMMISSION SHALL MAKE THE FOLLOWING NECESSARY RECOMMENDATIONS, IN REDUCING CARBON EMISSIONS BY THE PREPARATION, PREVENTION AND MANAGEMENT OF FUTURE CLIMATE FIRES

WHEREAS Climate Change/ or Crisis is happening much faster than even climate science has predicted; and WHEREAS by not doing everything possible to prevent large carbon fires, we are consequently contributing to climate change;

and WHEREAS 25% of all emissions are caused by global wildfires and a far greater percentage than that has contributed to carbon emissions in Ventura County in the last few years;

and WHEREAS climate change is irreversible, and is predicted to get much worse, leaving Ventura county vulnerable to more frequent, and even greater climate fires, risking life and the quality of our community

and WHEREAS the international community states we have a 12-year window in which to act to avoid catastrophic climate conditions, which will directly affect our County;

and WHEREAS 19 of 21 wildfires in California were caused by the negligence of utility companies, serving to exacerbate climate change and more fires in our County;

and WHEREAS our County is currently below the state standards required to prevent fires and climate change;

and WHEREAS climate change is a war we are losing, and is as urgent as war itself, and is the issue of our time, requiring profound and immediate action if we are to survive, as a nation, and as a people, and as a County

The COUNTY PLANNING COMMISSION, therefore, adopts this companion resolution to combat climate change through fire preparation, prevention, and management, by the following actions:

I. The County Planning Commission SHALL require strict regulations of all utility company materials, equipment and operations in the County. The County Planning Commission will recommend, at minimum, the following:

All utility companies are to clear brush and debris under all electric lines in the County; 2) That all electric lines in the County be reinforced, so as to be spark-resistant in high winds; and that the utility company use high-quality materials that prevent fire hazards (such as \_\_\_\_); 3) That since transformers in the power grid are susceptible to blowouts and fires during power surges, auto shutoffs must be deployed on all transformers throughout Ventura County; and those transformers be insulated from the environment and that brush be cleared from all transformers; 4) Utility companies are NOT to conduct business-as-usual operations during orange and red alerts; and that an evaluation of the area, determined by oversight as to its safety, be required before work can be done on any line that is a potential fire hazard. The utility must be willing and able to work more closely with County officials, and new standards required by the County and State to prevent future fires exacerbated by climate change and the growing problem of climate crisis; 5) The utility is to acknowledge climate change and provide education on climate change to its customers, as well as providing a protocol for orange and red alerts, and a utility emergency phone activation/network, coordinating with emergency services (EMS); and that the utility

provide a plan for customers during fire blackouts and general outages; 6) It is also recommended to the utility that they consider a youth summer program, putting students to work clearing brush in summer/on weekends when youth are not attending school.

II. The Planning Division SHALL require that all Cities within the County have fire lines around City residents in burn-risk areas; and there be immediate plans drawn and re-drawn for firelines in communities throughout the County; it is also required that each City within the County be responsible for the management of fire lines; 2) And that each City within the County employ the Fire Departments of those respective Cities to conduct safety inspections to all areas vulnerable to fire within the County; this will require additional funds by each City within the County, as a necessity to prevent fire and compounding damages; and it is recommended that each City within the County be required to provide such funding; 3) And that each City within the County work with the utility company to coordinate fire lines and to oversee respective responsibilities for those fire lines; 4) A similar youth-to-work project could be employed to create firelines 200 yards deep from residents in burn-risk areas; 5) And that the Cities, in County burn areas, where structures have been lost or damaged, assist residents in controlling vegetation on their vacated properties; 6) And that Cities within Ventura County be required to increase by 20% fire department staff and equipment to prepare for fire prevention and fighting future climate fires, and this be increased periodically as needed; 6) And that all City fire departments within the County be equipped with the personnel to provide safety inspections in all burn-risk areas, as well as to provide education to the public on climate change, fire prevention, and fire safety during active fires.

III. The Planning Commission, working with various insurance groups in the County, SHALL require of residents in burn-risk areas within the County to 1) To undergo landscape safety inspections; 2) Be given education by respective Cities within the County on shrubs/plants/trees that are fire resistant and thrive in drought conditions; and that 50% of all vegetation meet drought and fire resistant specifications; 3) That the Cities within the County provide residents access to a landscape expert or advisor; 4) That Fire Departments within Cities of the County develop specific fire safety standards and educate residents; 5) That the Cities of Ventura County provide information on types of structures that are most fire-resistant. 6) That the Cities of Ventura County restrict the planting of palm trees in burn-risk areas. 7) That every City within Ventura County have a designated hotline that the public can call during a fire; And that through water department billing services, that all residents be given specific instructions on fire prevention during orange and red alerts; and that every City in Ventura County provide an instruction pamphlet (to go out with utility billing) on what to do in a climate fire; 8) That each City within the County be required to have a water conservation plan implemented within the City to reduce residential and commercial water consumption by \_\_%, as to save our water for times of drought and climate fires; 9) An ordinance be established that no free-standing structures contain flammable materials, such as old tires, oil, insecticides, gas, etc. No free structure can act as a flammable fire hazard.

IV The Planning Commission SHALL require the upgrade of all equipment/evacuation plans...related to fire:

1) The Planning Commission recommends the requirement that all Cities within the County upgrade fire hydrants to meet State-specific standards; and there be in place backup generators for these fire hydrants; 2) That since backup water systems were turned off during the Thomas fire, backup water

systems be re-evaluated by respective Cities within the County; 3) That water containment vessels in hillside burn-risk areas be upgraded, to include steel/rather than plastic plumbing; and that these facilities be replenished during both orange and red alerts; 4) And in areas of the County where water storage facilities are needed, that Cities in Ventura County make it a priority to build water storage facilities; 5) That each City within the County revisits emergency evacuation plans; and that shelters not be designated in the path of the fire. (VenturaCounty Fairgrounds, as an example). \*Recommended shelter for Ventura be the hotel areas on East Harbor, between Ventura and Oxnard; or the commercial Ventura Harbor parking area; 6) That every City within the County develops new ordinances to ease restrictions by SCE on rooftop solar, backup generation, and battery storage. It is essential to expand solar installations, which will help save lives, coordinate residents during fires, and provide access to continued power, providing mobile phone, wifi, and computer charging, and empowering a much larger population to maintain links to the outside world during prolonged fire blackouts. This will also be of great service to our community. By easing restrictions on solar, it opens channels for relief to extended families living outside the burn areas, so they know the safety and wellness of loved ones. 6) It is recommended that each City fortify its own government buildings with solar, to both provide for a working government during times of fire blackout, and catastrophic conditions, and to provide government services to the community during climate fires; 7) Upgrade Ventura County's GPS network, for better coordination with all first responders and the community at large. 8) The Planning Commission recommends replacement lines and new electric lines be put underground, when and where possible.

V. The Planning Commission recommends that every City within the County have a volunteer fire prevention task force; and that these task forces be given support by their respective Cities to conduct town hall meetings, and to coordinate with the Cities of Ventura County the dissemination of climate change / fire education, conduct CPR trainings; and assist in EMS (emergency services) during fires; and that these task forces can work freely or through Community Councils, where they exist in the County.

VI. The Planning Commission recommends a County carbon tax on all those in the fossil fuel industry of 2%, to be used to educate the community on climate change and climate disaster preparedness. (This is similar to the tax that has long-been applied to the tobacco industry); And further, that the fossil fuel industry be charged for the water they use in the drilling process, at the same rates other commercial outlets now pay for water use. Further, it is recommended that 50% of the additional County funds inured from the fuel industry be used to recover tax revenues lost in the Thomas and Wolsey fires; and 40% go to the ongoing work of the Climate Action Plan, and specifically for a salaried consultant/expert climatologist for the Plan; and the dissemination of information/education on climate education in the plan; and that 10% be used to create grants for community groups promoting the education of climate change and County climate disaster preparedness.

VII. The Ventura County Planning Commission acknowledges the reality of climate change. It is a non-partisan issue based on irrefutable scientific data and physical evidence. It is impossible to ignore how climate change has already affected our County. Because it is irreversible and could become much worse, causing more severe problems in the future, it is the obligation of this body to plan for climate disasters, their prevention and management, and to both minimize the County's impact on the environment, as well as to preserve the general welfare of Ventura County.

VIII. The Planning Commission, by proposing the following Resolution, attaches these requirements/ recommendations as a companion to the Climate Action Plan.

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\*Since fire produces 25% of global CO<sub>2</sub>, and is responsible for as high as 90% of carbon emissions the last few years in Ventura County, adding to the world's carbon footprint, this resolution is essential in challenging climate change, and reducing our carbon impact by preparing for, preventing, and effectively managing our future climate fires in Ventura County. The Planning Commission must bravely set aside climate deniers, and with vision, take action, while educating the public on what they must do to better prepare for our future climate crisis.

## **2. PERSONAL COVER LETTER TO THE BOARD OF SUPERVISORS**

Respectfully submitted,

Grant Marcus, Retired RN, First Responder, Ventura Hillside Resident

To: The Climate Action Plan, Members of the Planning Commission, Members Board of Supervisors:

A registered nurse, a midtown Ventura hillside resident, and first responder to the Thomas Fire, I was in the belly of the beast throughout the night, saving my home and others from a climate disaster. I now have first-hand observations and experience with climate change, and how our County must better prepare for it. It will mean, ultimately our future.

When it's 87 degrees, with Santa Ana winds in December, there can be no doubt about climate change. Not for me anyway. I remember at age 9, in Ventura, waiting for it to snow in December. I remember when farmers fearing the freeze, put out "smudge pots," with an average of 7 days out of the year having freezing temperatures. It was not uncommon for temperatures to descend into the low 20s in Santa Paula, or in Ojai. We are now nowhere near that climate possibility. Instead, it's 87 in December, with unheard of Santa Ana winds for winter, and with firemen unable to respond to the fire, having nothing to fight it with, while fire entered our county cities, damaging and destroying over 1500 structures. Our only relief, toxic shelters in the path of toxic smoke as the fire raged on. The air quality at the Fairgrounds was as hazardous as being in the fire itself. I know. I was in both places, as I had to guide a new resident to the shelter, then I quickly returned to the fire to protect neighbors, our street, as Terrace Drive was ablaze.

Beginning with prevention, to fire management, to evacuation and rebuilding plans, the County needs much better preparedness and response to climate change and climate fires. In effect, we will reduce our carbon footprint. And the County Planning Commission is where it starts. The buck begins here, so to speak. In retrospect of my experience, from the fire to the shelter, watching my neighbors battle first for City permits, and then the insurance companies to rebuild--the entire process has been inadequate. The only quick reaction to the fire by the City of Ventura was sadly to hang out bright yellow signs disclaiming their responsibility for our health, if we hillside residents returned to our homes. It was as if the City was rubbing the salt in our noses.

But where were residents to go who did not lose their homes? Our homes stood without power for weeks and were unprotected and prone to vandalism. And there were spot fires everywhere springing up, with a month of Santa Anas still left to blow. A yellow sign disclaiming responsibility was not the answer to our problem then, and it isn't the answer now, nor in the future.

The City of Ventura, and Ventura County has been inadequate in changing with the extreme weather or climate change. Poor vision has subsequently resulted in negligence and great loss to our City. A quick glance at City procrastination/negligence includes the City's failure to update fire hydrants, falling 3 years behind; its consistent failure to regulate SCE; the failure to manage existing fire lines or inspect fire zones for safety standards, and the failure to replenish the water containment facilities during orange and red alerts. In fact, in Ventura, the City relinquished its fire line responsibility and stopped property inspections by the Fire Department in order to save money. These delays, reversals, and inadequacies, which add up to negligence, left our firefighters in the middle of the biggest fire of their lives, with nothing to fight it with. The trouble is, climate change is NOT procrastinating. It's moving swiftly forward. So this impeding negligence by County Government must change at all levels. It begins with the Climate Action Plan, and the Ventura County Planning Commission's legitimate aggressive approach to our climate crisis, because in that aggressive approach, we are also making up for lost time.

There are seven (7) strong reasons to oppose the Climate Action Plan as it is written: 1) The plan fails to address which is possibly 90% of our carbon emissions over the last 2 years, and that is carbon dioxide emissions from 2 enormous County fires, the Thomas and Wolsey fires. Between the two fires, over 345,000 acres were burned, or approximately 640 square miles (Wallace-Wells, *THE UNINHABITABLE EARTH*, pp70-77); With new data more accurately reflecting our future prognoses, it has been predicted that Ventura County can expect a catastrophic climate fire every 7 years. Ignoring this prediction of cyclical rain, drought, and fire is a huge oversight, and the plan should reflect these projections. By ignoring the carbon impact of fire (this elephant in the living room) it also makes it difficult to justify or pass ordinances to prepare for, prevent, and effectively manage future fires in Ventura County; 2) Along with excluding the carbon emissions from past fires and future projections, the Climate Action Plan also ignores the emissions created from having to rebuild structures lost to fires and future fires. We can expect 3 enormous fires within the 20 year plan. What are the emissions from ripping up and redeveloping properties destroyed by fire? Of re-pouring concrete, growing, milling, and hauling new lumber, and re-landscaping our ashed vegetation? What are the emissions caused by all the new materials, the wiring, the sheetrock, and glass it takes to haul and erect in rebuilding? Ignoring the carbon impact of County fires ignores County complicity. 3) While the plan does include the need to decrease individual emissions, the plan fails to address commercial emissions by the fossil fuel industry. This decision is suspicious, as the County has already shown favoritism in its handling of drilling permits, and once again indicates it is protecting money interests; 4) The plan excludes educating the public about the seriousness of the climate crisis. The excuse the Climate Action planning members give for not educating the public is that it would be too costly. Yet, the public will not abide by a plan if it is not educated about it, especially when there are no mandates requiring the public to do so; 5) Although the plan eliminates evaluating state and federal operations, such as freight or offshore drilling emissions, the Climate Action Committee does little to show that all these emissions, which are still emissions, are not under the control of the plan. The "pie" model should serve to demonstrate the percentage of emissions that have NOT been considered by the Climate Action Plan, so the public can see transparently the plan's limitations for themselves; 6) The County must be aware of current and stale data in expressing emission releases and their impact on the environment. Going by old AR 4 data, that has been devalued by the EPA as criteria, rather than using AR 5 leaves room for doubting the authenticity in pursuing the goals of the plan; 7) Simply put, the plan requires little, and it bares no teeth. -- There are smaller examples, but these 7 grotesque examples indicate the failure of the Climate Action Plan to appropriately and

thoroughly evaluate all emissions. Enough said, but for the fact there is no climatology expert on staff as an exclamation. The public is already suspicious toward its government. How else can they look at this plan, and its methodology, without thinking, "another 'rigged system' using the pretense of public meetings to appear transparent, while the decisions reached have already been done in the back rooms and board rooms of the well-connected merchants of our community."

Still, responding to climate change is essential. If we do not respond, we exacerbate and expedite it. But responding to it honestly and accurately is also essential if we are to be effective and realistic. To do nothing for reasons of denial, money, or to maintain the status quo (the General Plan) is providing comfort to our greatest enemy, climate change. And it will only make it worse. The County's 640 square miles of fire the last few years has left an enormous carbon footprint on the planet. And it is projected that even if we all become stewards and environmentalists and acted aggressively, the damage we have already caused is irreversible, and we can expect a carbon-conflagration every 7 years. And if we remain in the Climate Action Committee's rose-colored glasses, we can expect to have even more frequent and severe carbon fires in our future. And our County, by accepting the plan as it stands, is responsible for that.

This past year, and because of a prolonged rainy season, in spite of vegetation on my property reduced to ash just two years earlier, I now have de-weeded my property 3 times already. The last time I had to do that was the year of the Thomas Fire. And as I observe two streets above me, where I view what looks like Fallujah, of fire-bombed lots where houses used to be, deciduous growth has all but consumed the concrete slabs. It scares me. Two streets up, on Hillcrest, the growth is back with a vengeance, and with no fire line or City officials to do anything about it. Nature is warning me that another fire is imminent. And the time to do all we can to prevent it, or to minimize its impact, is essential to the survival of our community and life on the planet. We cannot erase or reverse what our carbon footprint has already done, but we can prevent further damage and a Climate Armageddon in our County if we make it our purpose.

Our approach must be that we are at war with climate change, the way we are still at war following 9/11. Only this isn't aluminum tubes. There is substantial physical evidence. And we will serve as traitors to our loved ones, ourselves, and future generations if we stand down and do not fight it in every way possible. There is only one choice we have in our fighting, and that is to broker a peace with the earth and choose to be good carbon stewards for life. The earth has nothing to lose. We do. And it is far more powerful than our government and ourselves. The Thomas Fire was the first MOAB fired in our area. The Wolsey Fire was the second. We can go back to our cozy bunkers and pretend there is no enemy, but that will only mean more frequent climate bombs will find us. And more of our County will be destroyed. And this will happen again and again, until, we too are refugees.

Like many previous wars we have entered into, this is yet another one where we must first look at our own behavior. Will the Planning Commission pledge to work first from the influence of conscience, and last from the influence of money to prevent even more deadly climate disasters? This is the question and very first requirement, as everything must change in government, including its nepotistic relationships, if we are to win this war. To fight it on the front lines of policy is the patriotic thing to do. It is the right thing to do. Your duty calls you to do everything in your power, and your conscience. Your generalship will save lives, our County, thousands of species, and our humanity. The power to lead is yours. It will be on our backs if you fail to shoulder it.

Grant Marcus, 6/19/19