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## Air Pollution in California

Californian is regarded the city with the highest instance of the air pollution. Southern California is known to have retained the worst air quality in the nation as per the report that was produced by the American Lung Association. According the report the leading areas included the Los Angeles, Riverside, Ventura, and San Bernardino and Orange counties. The lung damaging gas that is caused by the polluted environment is believed to have been linked to the rising cases of asthma and lung cancer among residences of the mentioned counties. The Los Angeles (LA) beach metro area which include the inland Empire was found to the top of all cities in the United States for ozone pollution. The following cities included New York, New Jersey as per the “state of the air” rankings. The regions is believed to have dropped in the rankings with it moving from the 7<sup>th</sup> worst to the 9<sup>th</sup> worst last year. The cause of pollution is believed to come from the diesel exhausted from cars and industries. The small diesel particles are believed to bypass an individual’s body’s defense system and lodge deep in the lungs damaging pulmonary passages. The U.S Environmental Protection Agency has put together the increasing of hospital visits and the lung growth issues that is in children and teenagers because of the dirty air. Research found out that women that breathing unsafe levels of fine particle pollution were twice likely to develop dementia and Alzheimer disease (Office of Management and Budget, 57).

There are many factors that are behind the unhealthy levels of air pollution in California.

The first is that California is highly populated with the large amounts of population being generated by the activities of over 33 million individuals. Second is California's topography traps pollution and third is it has a warm, sunny climates that allows for the ozone and air particles to form. Some other forms of air pollutants include Gasoline from diesel-powered motors, factories, power plants, and fire places. There are also tons of pollutants that enter through evaporation. The sources include fuel from gasoline storage and dispensing facilities, truck and gasoline containers, personal, household and aerosols among other ingredients. The California's topography is perfect of trapping and forming air pollutants. Most of the cities in California are built on plains or valleys that are surrounded by mountains. The areas trap the air pollution and prevent air from circulating. The natural bowls do trap air pollutions and prevent the air from circulating. In some days temperate inversion prevents vertical mixing and dispersion of pollutants. During the winter the temperature inversions could trap the tiny particles of smoke keeping the pollution close to ground where people breathe those (Loomis, Huang & Chen, 98).

The Lung Association conducted the research on the effects of air pollution found out that over a three period from 2014-2016 when the research was conducted, the calculations found that the annual average of days that ozone and particles exceed the federal safety levels was high. San Bernardino County was found to be the leading of all the five counties of California with nearly 146 unhealthy days that was followed in the following order Riverside 122, Los Angeles, 112, Orange, 13 and Ventura, 12. The riverside had the most unhealthy particle days with 13, and followed by the Los Angeles, San Bernardino, Orange and Ventura. Research also indicated that

the number of particle pollution days in L.A basin that occurred from 2011-2016 kicked up the number of particle pollution.

There was a drop in the particle from mid-2016-2018 from a high of 37 in 2013 to 11 in 2016. The drop is majorly attributed to the more rain that begun to be experienced in the area. The brake-lining filings and other particles found on the roadways, according to research. When the trend is compared to the previous, years, it can be stated that there has been a progress over the last 19 year. According to the American Lung Association in California, the air condition existing in Los Angles 50 years was similar to that of Beijing today. It is important to point out the fact that Beijing is considered the highly polluted city. The report also stated that there has been upticks in ozone in many parts of Southern California especially in San Bernardino. This was majorly attributed to the heat waves that was experience in 2016 which was considered the second-warmest year on record. It is important to point out the warmer air creates smog in the atmosphere. The ozone is produced when oxides of nitrogen and volatile organic compounds are exposed to sunlight and heat. This is then used to indicate that climate change represents major challenge in air quality progress throughout the state. Despite the efforts to improve air quality, the impacts of climate change is still interfering with the progress. The Southern California air pollution still gets worse with the federal attacks by the current administration on the Clean Air Act, and the carbon reduction rules for the power plants.

California is fighting an attempt by the EPA to revoke a waiver in place that is supposed to run for 10 years to allow the state to set its own fuel-efficiency standards for cars and trucks. The EPA during the last month came up with a draft decision that provided the reasons for easing fuel efficiency regulations for cars and light-truck model years 2022-2025. California has set a

goal which aims to reduce the greenhouse gas emission by 40% by 2030 through the use of biofuels, solar and wind energy as reliable sources of energy.

The state is also driving forward to put in place incentives to buy electricity or plug-in hybrid cars in a means to cut climate pollutants. Southern California has experienced a 30 percent reduction in ozone and more than 80 percent drop in the number of particle pollution in past 19 years according to the research by the Lung Association reports on air quality (Air pollution: Consequences and actions for the UK, 14). Most of the success can be attributed to the clean federal clean air act, that was enacted in 1963 and strengthened in 1970 and 1990 and the state air regulations. The federal efforts means that it would increase pollution leading to more unhealthy air days, emergency room visits and high healthcare costs. The California Air Resources Board and the South Coast Air quality Management District are on the forefront advocating for increase in number of electric car sales and for additional electric charging stations. Electrification of transit is considered to be part of the SCAQMD's plan to reduce ozone and particles. Research also shows that there are over 500,000 zero emission cars that have been put on the road in California today. There exist 30 models of electric and hybrid-electric vehicles. It is projected that in the few years the reductions will go up to 100 models leading to people doing away with fossil fuels.

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