

Policy Memo: Tackling Heavy Pollution in Wilmington, California

It is important to discuss communities such as Wilmington, California when creating a policy that would reduce emission reduction and air quality mitigation. Wilmington is known to site very active oil refineries and major freeways. As a consequence, it has become one of the most polluted cities in the United States and is known to have extremely low air quality. Action has been taken to reduce the impacts of the extreme greenhouse gas and particulate matter emissions such as air monitoring plans and equipment; yet, this isn't enough as Wilmington's air quality is still considered 'poor' by Plume lab's standards. To create even more progress, there needs to be more policy implemented that incentivizes carbon offset technology so that there will be fewer greenhouse gas emissions in the atmosphere without completely dismantling the fuel extraction infrastructure that is needed to generate electricity.

Wilmington has a population of over 300,000 people, yet is the district with the third-largest oil field in the United States. Being in proximity to petroleum refineries, seaports, rail yards, warehouses, and four major freeways has severe consequences for the health of the people that live in the district. Among the pollution burdens experienced by residents of Wilmington include particulate matter emissions and exposure to toxic air contaminants such as ammonia, hydrogen cyanide, and benzene. Oil drilling's proximity to schools and neighborhoods poses serious health risks of long-term illnesses such as asthma, leukemia, and other forms of cancer, especially for those who are immunocompromised. It is also important to add that many of Wilmington's residents are people of color with higher black and brown demographics which makes this district a serious case of environmental racism as they are forced to live in a district with some of the highest rates of pollution in the United States.

Ways this has been combated by Policy is through the Community Emissions Reduction Program which focuses on community action to reduce air pollution, and extending the cap and trade program as it has been shown to also contribute to the decline in emissions over the last decade. Technological advancements under Policy are also crucial; the AB617 bill orders air quality equipment to be installed in locations that are at risk for extreme pollution. Air filtration systems are also being installed near schools and public places to reduce particulate matter ingestion.

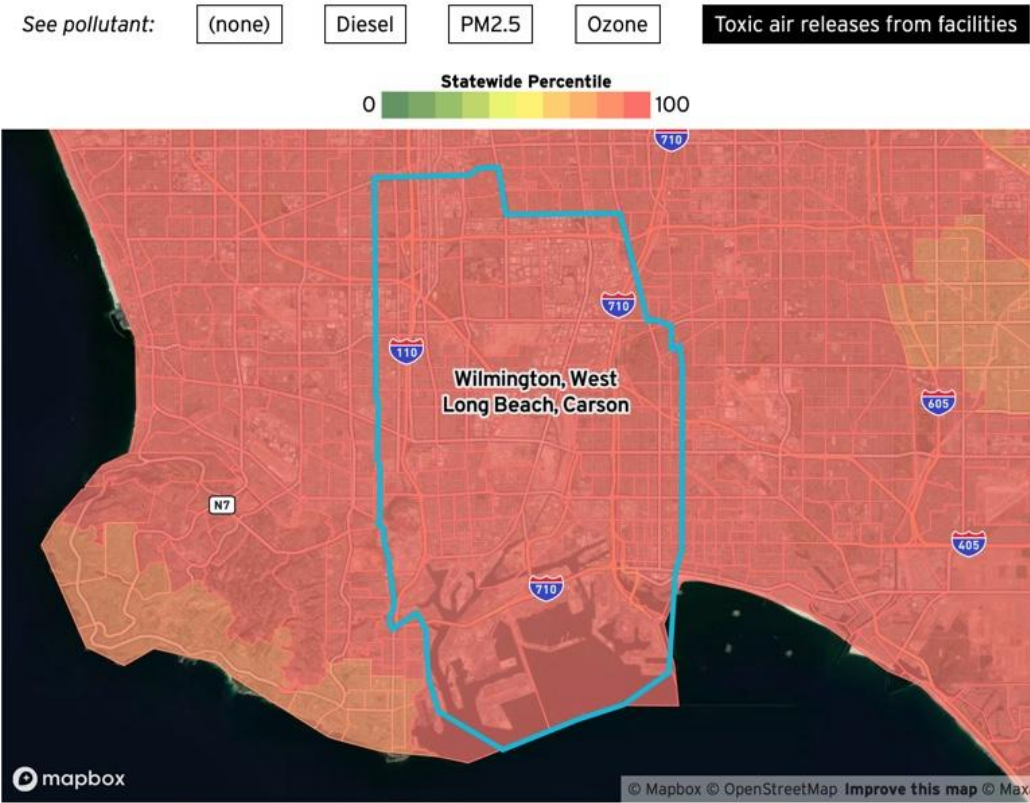
While the policy and technological advancements that have already been implemented are contributing greatly to the overall improved air quality of Wilmington. The district still has poor air quality which is considered to be dangerous for those who are immunocompromised. Cal Matters states that "On 23 days last year, fine particles violated the nation's health standard — some days were so polluted that concentrations of fine particles were more than twice the standard, according to data from the ports of Los Angeles and Long Beach," (Yee and Getahun). Policy that invests in startups such as Lectrolyst, a chemical company that uses carbon capture technology to turn emissions into ingredients for pharmaceuticals. Removing some subsidies for fossil fuel industries and instead incentivizing startup technology is what is needed to help Wilmington graduate from 'poor' air quality status. Until then, Wilmington will continue to be a 'sacrifice zone' for fossil fuel industries, and marginalized communities that remain there will suffer greater consequences.

Current Pollutants	Air Quality Scale	Over the past hour
PM₁₀  Poor	Particulate Matter  are inhalable pollutant particles with a diameter less than 10 micrometers. Particles that are larger than 2.5 micrometers can be deposited in airways, resulting in health... more	71 63 µg/m ³
O₃  Fair	Ground-level Ozone  can aggravate existing respiratory diseases and also lead to throat irritation, headaches, and chest pain.	44 91 µg/m ³
PM_{2.5}  Fair	Fine Particulate Matter  are inhalable pollutant particles with a diameter less than 2.5 micrometers that can enter the lungs and bloodstream, resulting in serious health issues. The... more	35 17 µg/m ³
NO₂  Excellent	Breathing in high levels of Nitrogen Dioxide  increases the risk of respiratory problems. Coughing and difficulty breathing are common and more serious health issues such as respiratory... more	10 19 µg/m ³
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Image (1.1) Describes the current air pollutants in Wilmington as recorded on August 30, 2022, ("Wilmington, CA Air Quality Index").

Residents in Wilmington, Carson, West Long Beach live near major sources of air pollution

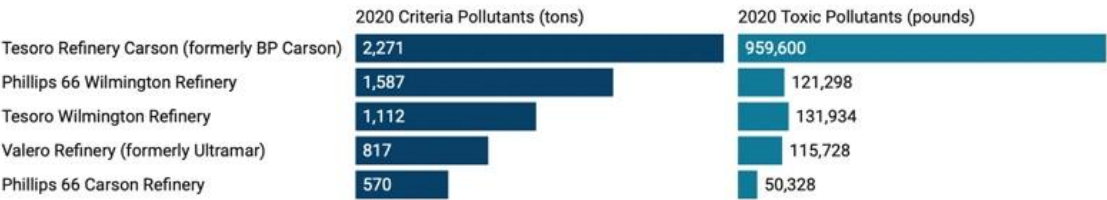
The **higher the percentile**, the more that census tract is exposed to a pollutant compared to the rest of the state.



Source: [CA Office of Environmental Health Hazard Assessment, CA Air Resources Board](#)
Credit: Erica Yee, CalMatters

The region's oil refineries emit tons of air pollutants

The five refineries in Wilmington and Carson emitted over 6,000 tons of smog-causing nitrogen oxides, hydrocarbons and fine particles and 1.3 million pounds of toxic pollutants such as benzene in 2020.



Facility names used as listed on the [SCAQMD Flare Operators](#) page.
Chart: Erica Yee, CalMatters • Source: [South Coast Air Quality Management District](#) • Created with [Datawrapper](#)

References

Lavelle, Phil. "Extreme air pollution choking Wilmington, California." *CGTN America*, 11 January 2019,

<https://america.cgtn.com/2019/01/11/extreme-air-pollution-choking-wilmington-california>.

Accessed 30 August 2022.

"Wilmington, CA Air Quality Index." *AccuWeather*,

<https://www.accuweather.com/en/us/wilmington/90744/air-quality-index/2178715>.

Accessed 30 August 2022.

"Wilmington, Carson, West Long Beach | California Air Resources Board." *California Air Resources Board*,

<https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/communities/wilmington-carson-west-long-beach>. Accessed 30 August 2022.

Yee, Erica, and Hannah Getahun. "A hot spot for polluted air: By the numbers." *CalMatters*, 1 February 2022,

<https://calmatters.org/environment/2022/02/california-environmental-justice-by-the-numbers/>. Accessed 30 August 2022.