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Dear Acting Director Garrison, Executive Director Wildgoose, Specialist Quaine and Regional Administrator D'Alessandro,

I urge the Federal Aviation Administration (FAA) to assess the potential public health and environmental justice implications of the proposed expansion of operations at Tweed-New Haven Airport (the proposal or the proposed expansion) and consider a more in-depth analysis, which could occur through an Environmental Impact Statement (EIS).

According to the draft environmental assessment (draft EA) published in March of 2023, [1] the proposal would extend Runway 02 by approximately 639 feet and Runway 20 by 336 feet with the purpose of allowing Avelo Airlines—the sole carrier operating at Tweed—to increase total air traffic and expand the use of Boeing 737-800 aircraft, which are more carbon intensive than the Boeing 737-700 aircraft currently in use.[2]

The draft EA does not fully assess how increased flights by larger commercial airplanes threaten public health in already heavily burdened neighborhoods. In addition to asthma, ozone concentration and other environmental health burdens, it does not fully account for the current and potential increased use of leaded fuel by small private aircraft, which put communities at higher risk for lead exposure.

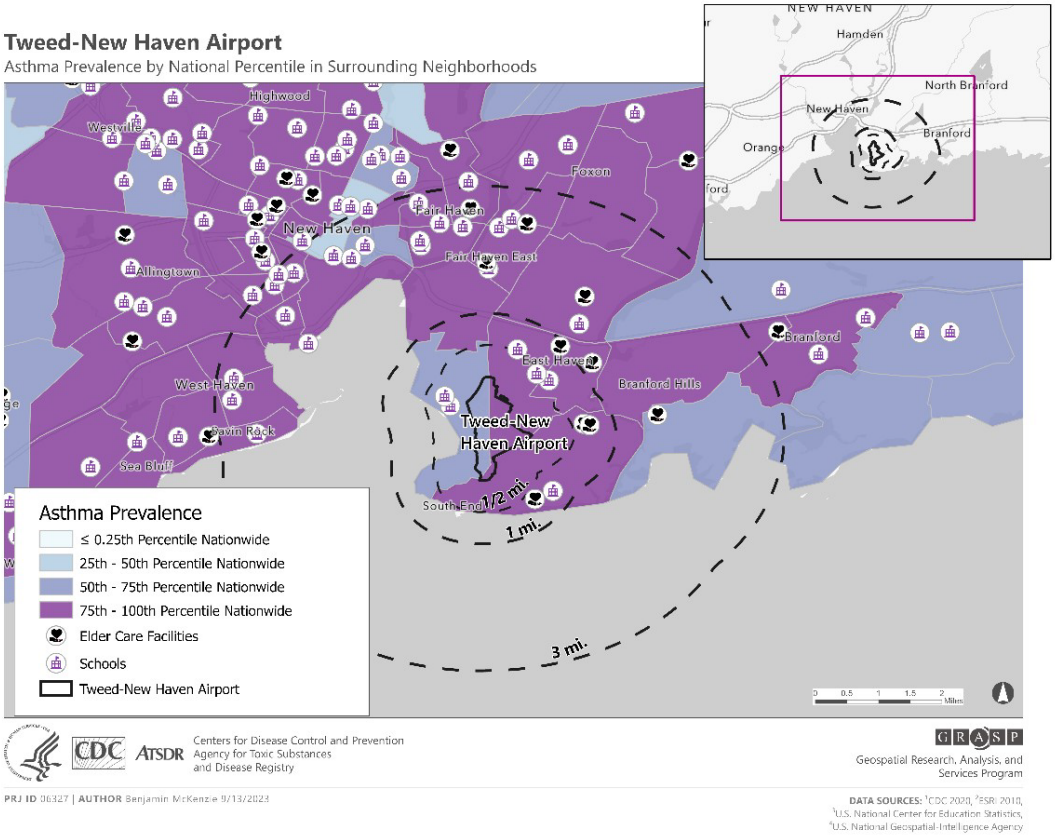
The U.S. Department of Health and Human Services (HHS) recently established an Office of Environmental Justice, which I oversee as Assistant Secretary for Health. The Office's mission is to protect the health of disadvantaged communities and vulnerable populations on the front lines of pollution and other environmental hazards that affect health. I share this letter in that capacity.

[1] Tweed New Haven Airport: NEPA Draft Environmental Assessment Runway 02-20 Extension and Terminal Expansion Program. Draft Environmental Assessment. McFarland Johnson, March 2023. https://www.tweedmasterplan.com/nepa-documents

[2] Cui Q, Chen B, Lei YL. Accounting for the aircraft emissions of China's domestic routes during 2014-2019. Sci Data. 2022 Jul 6;9(1):383. doi: 10.1038/s41597-022-01494-0.

According to the Centers for Disease Control and Prevention's Environmental Justice Index,[3] residents of census tracts near Tweed already face some of the nation's highest asthma rates, in part because they breathe more ozone than 96 percent of communities nationwide. See Figure 1.

Figure 1 - Asthma Prevalence in Surrounding Neighborhoods



Population-based studies have documented that acute ozone exposure is associated with decreased lung function, worsening of asthma, hospital admissions increases and daily deaths.[4] Asthma sufferers face adverse health outcomes when breathing ultra-fine particles emitted by airplane engines.[5] Aircraft emissions are especially associated with increased hospitalization for asthma, respiratory conditions, and heart conditions in susceptible subgroups such as children below 5 years of age, people above 65 years of age, and lower socioeconomic groups.[6]

Significantly higher than expected particle numbers emitted by jet aircraft have been detected as far as 10 miles away from a major airport.[7] An increased relative risk of hospital admission due to

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[3] Created by the Centers for Disease Control and Prevention and Agency for Toxic Substances Disease Registry. https://onemap.cdc.gov/portal/apps/sites/#/eji-explorer

[4] Last, J.A., Pinkerton, K.E., Schelegle E.S. (2017). Ozone and Oxidant Toxicity. In: Respiratory Toxicology. Elsevier Inc., pp. 389-402. https://doi.org/10.1016/B978-0-08-100601-6.02076-7

[5] Gutschow, Wendy. "Airport pollution linked to acute health effects among people with asthma in Los Angeles." Keck School of Medicine of USC. (July 2022) https://pphs.usc.edu/airport-pollution-linked-to-acute-health-effectsamong-people-with-asthma-in-los-angeles/

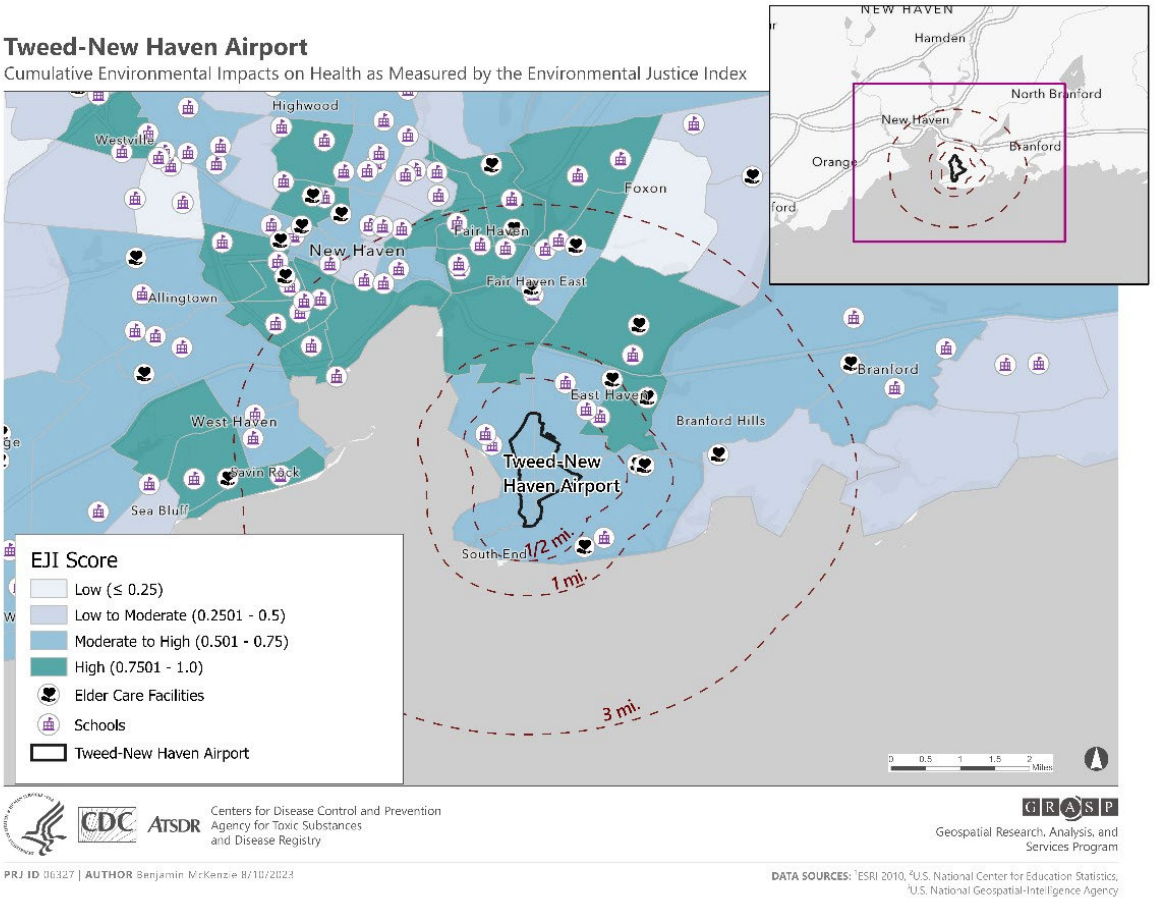
[6] Bendtsen, K.M., Bengtsen, E., Saber, A.T. et al. A review of health effects associated with exposure to jet engine emissions in and around airports. Environ Health 20, 10 (2021). https://doi.org/10.1186/s12940-020-00690-y

[7] Hudda, N., Gould, T., Hartin, K., et al. Emissions from an International Airport Increase Particle Number Concentrations 4-fold at 10 km Downwind. Environ. Sci. Technol. 2014, 48, 12, 6628–6635 (2014). https://doi.org/10.1021/es5001566

respiratory conditions for residents living within five miles of an airport has been documented at multiple locations, with "a stronger effect for traditionally lower socio-economic groups."[8]

Many of the neighborhoods near Tweed have a high asthma burden and also score above the 80th percentile on the Environmental Justice Index due to overlapping environmental health stressors, including toxics release inventory sites and risk management plan sites. These neighborhoods have a high estimated prevalence of cancer and mental health conditions. In addition, they include schools and elder care facilities where sensitive populations are likely to congregate. See Figure 2 below.

Figure 2 - Nearby Schools and Elder Care Facilities in Heavily Burdened Neighborhoods Near Tweed-New Haven Airport



A potential further increase in the health burden of residents near Tweed is especially alarming because, as noted in *The Lancet Public Health* in 2022, "The Greater New Haven metropolitan area is served by one health system and has one of the highest rates of asthma prevalence in the USA due to a combination of older housing stock, high rates of poverty, a high proportion of rented housing, and poor air quality."[9]

Unfortunately, the asthma burden—which can be especially fatal where health care infrastructure is limited—falls disproportionately on Connecticut residents of color. The *Connecticut Mirror*,

[8] Lin, S., Munsie, J.P., Herd-Losavio, M., et al. Residential proximity to large airports and potential health impacts in New York State. Int Arch Occup Environ Health 81, 797–804 (2008). https://doi.org/10.1007/s00420-007-0265-1

[9] Samuels, E.A., Taylor, R.A, Pendyal, A., et al. Mapping emergency department asthma visits to identify poor-quality housing in New Haven, CT, USA: a retrospective cohort study. The Lancet Public Health 7, 8 (2022). https://doi.org/10.1016/S2468-2667(22)00143-8

using data from the Connecticut State Department of Public Health, has demonstrated a stark disparity in emergency room visits for asthma statewide, with black and Hispanic state residents far outpacing white residents. See Figure 3.

Figure 3 - Disparities in Emergency Room Visits for Asthma Statewide by Race[10]

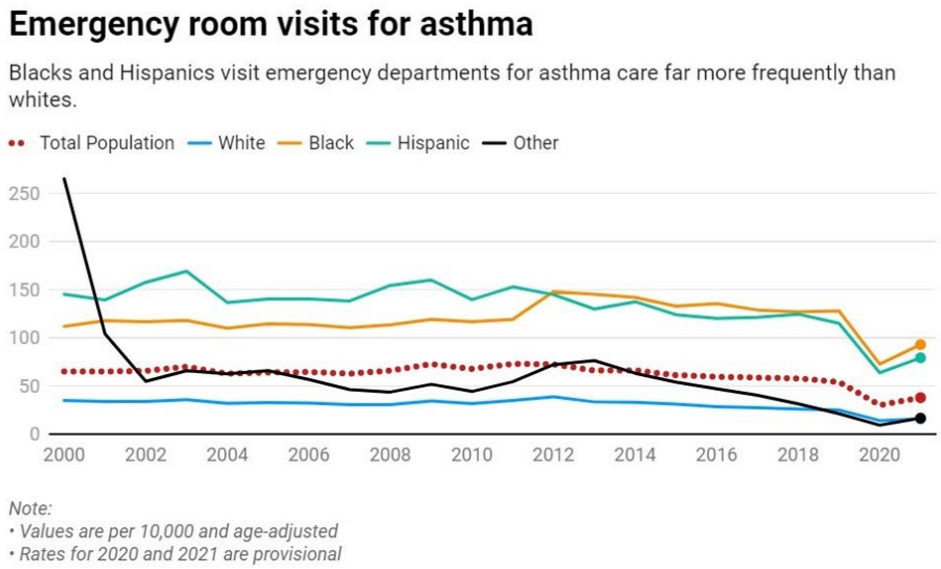


Chart developed by José Luis Martinez, Connecticut Mirror. Data source: Connecticut State Department of Health.

Asthma prevalence is highly disparate in New Haven. According to the New Haven Equity Profile, White New Haven residents aged 18 to 34 have an asthma rate of 18 percent, while Black New Haven residents in the same age group have a 23 percent rate and Latino New Haven residents have a 30 percent rate. The same disparity holds true across age groups, with White residents aged 35 to 49 having a 15 percent rate compared to 23 percent for Black residents and 20 percent for Latino residents; White residents aged 50 to 64 having a 13 percent rate compared to 18 percent for Black residents and 30 percent for Latino residents; and White residents aged 65 and older facing a 10 percent asthma rate compared to 15 percent for Black residents and 39 percent for Latino residents.[11] The likelihood that the proposed expansion will worsen health outcomes along similarly disparate lines, given the connection between asthma and poor health outcomes near airports, strongly suggests the need for further analysis.

I respectfully encourage the FAA to carefully consider the cumulative environmental health stressors in the area adjacent to Tweed-New Haven Airport and how the proposed expansion may further worsen public health in already heavily burdened communities, with particular attention given to the schools, elder care facilities, and other sensitive receptor congregation points in a five-mile radius. By allowing for more frequent flights by larger aircraft with more powerful engines, all expansion scenarios would increase health risks in these neighborhoods, several of which rank among the most cumulatively impacted communities in the United States according to the Environmental Justice Index.

In such heavily burdened areas, health-protective options can include: 1) installing air filters at schools, elder care facilities, and other public facilities within five miles of the airport; 2) an airport

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[10] CHART: CT emergency room visits for asthma by race. https://ctmirror.org/2023/01/25/ct-emergency-roomasthma-black-hispanic-white/. Accessed September 19, 2023. Used with permission.
[11] New Haven 2023 Equity Profile, DataHaven. See page 17.
https://www.ctdatahaven.org/sites/ctdatahaven/files/new_haven_equity_2023.pdf

net-zero pledge with guarantees of timely maintenance, electrification of airport facilities with clean energy sources, and other steps to reduce potentially health-damaging emissions on- and off-site; and 3) an analysis of the health impacts of the continued use of leaded fuel by private aircraft at Tweed-New Haven Airport, given the sensitive populations living near the fence line.

I strongly recommend the FAA conduct further analysis, which could be completed through an Environmental Impact Statement for the proposed expansion at Tweed-New Haven Airport. I thank you in advance for your consideration of these important public health and environmental justice issues.

Very respectfully,

<< Signed >>

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Rachel L. Levine
Assistant Secretary for Health
U.S. Department of Health and Human Services