August 30, 2024

TO:
SIPrules@tceq.texas.gov

CC: City of Austin Mayor Kirk Watson
City of Austin Council Member Natasha Harper-Madison
City of Austin Council Member Vanessa Fuentes
City of Austin Council Member Jose Velasquez
City of Austin Council Member Chito Vela
City of Austin Council Member Ryan Alter
City of Austin Council Member Mackenzie Kelly
City of Austin Council Member Leslie Pool
City of Austin Council Member Paige Ellis
City of Austin Council Member Zo Qadri
City of Austin Council Member Alison Alter
Travis County Judge Andy Brown
Travis County Commissioner Jeff Travillion
Travis County Commissioner Brigid Shea
Travis County Commissioner Ann Howard
Travis County Commissioner Margaret Gomez
TxDOT District Engineer Tucker Ferguson
TxDOT Environmental Affairs Director Doug Booher
FHWA Texas Division Director Carl Highsmith

REGARDING:
TCEQ is holding an informal comment period from July 30, 2024, through August 30, 2024, to solicit information relevant to the development of a designations submission for the 2024 primary annual $PM_{2.5}$ NAAQS of 9.0 micrograms per cubic meter.

Dear Texas Commission on Environmental Quality,

Reconnect Austin appreciates this opportunity to comment on the potential nonattainment designation of Travis County for $PM_{2.5}$ following the EPA's issuance of the lowered Particulate Matter 2.5 National Ambient Air Quality Standards ($PM_{2.5}$ NAAQS).

The EPA recognizes that $PM_{2.5}$ is a health concern. Small particles are dangerous in their ability to penetrate the lungs and bloodstream. This can cause: premature death, heart attacks, heartbeat irregularity, asthma and respiratory malfunction, coughing, and difficulty breathing (EPA). "Air pollution poses a great environmental risk to health. Outdoor fine particulate matter (particulate matter with an aerodynamic diameter < 2.5 μm [also referred to as $PM_{2.5}$]) exposure is the fifth leading risk factor for death in the world, accounting for 4.2 million deaths and > 103 million disability-adjusted life years lost according to the Global Burden of Disease Report. Air pollution can harm acutely, usually manifested by respiratory or cardiac symptoms, as well as chronically, potentially affecting every organ in the body. It can cause, complicate, or exacerbate many adverse health conditions" (Schraufnagel et. al 2019). Research has also found that exposure to air pollution including $PM_{2.5}$ can damage fetal health during pregnancy. A study in London found that "air pollution from road traffic is having a detrimental impact upon babies' health, before they are born. We estimate that 3% of term LBW [low birth weight] cases in London are directly attributable to residential exposure during pregnancy to $PM_{2.5}$" (BMJ 2017). Low birth weight can pose health and survival risks during infancy and can predict lifelong chronic illness (*The Guardian* 2017). Particulate matter air pollution has also been linked to reduced cognitive performance, especially in less educated populations and elderly populations (Zhang et. al 2018).

Roads are a major source of particulate matter pollution. $PM_{2.5}$ comes from both tailpipe exhaust and from non-exhaust emission sources including tire, brake, and road surface wear (Kole et.al 2017). "Up to 55% of roadside traffic pollution is made of non-exhaust particles, with around 20% of that pollution coming from brake dust" (Selley 2020, Air Quality Expert Group 2019). These non-exhaust particles, such as from brake dust, are incredibly damaging to human health and immune response (Selley et.al 2020). People living in close proximity to major roads are at greater risk of health consequences from breathing polluted air. These populations are disproportionately low income and communities of color (Samuels and Freemark 2022, EPA).

Reconnect Austin cautions against overreliance on a shift to electric vehicles as a method of reducing particulate matter pollution. Electric vehicles contribute to particulate matter pollution in the form of tire, brake, and road surface wear, which can be worse in electric vehicles compared to internal combustion engine vehicles due to heavier vehicle weights from electric

batteries. “While electric vehicles emit no exhaust fumes, they still produce large amounts of tiny pollution particles from brake and tyre dust” (*The Guardian* 2017). According to Dr. Ian Mudway at the MRC Centre for Environment and Health at King's College London, “There is no such thing as a zero-emission vehicle” (UK Research and Innovation, 2020).

Reconnect Austin has followed closely the EPA’s guidance on particulate matter pollution, as well as the consequences felt by both Dallas and Houston being in nonattainment for ozone. We recognize the impact of the potential nonattainment designation for Travis County.

Travis County has a preliminary 2023 $PM_{2.5}$ design value (averaged over 3 years of monitor data) of 9.6 micrograms per cubic meter ($\mu g/m^3$). The new lowered Particulate Matter 2.5 National Ambient Air Quality Standard ($PM_{2.5}$ NAAQS), finalized in February of 2024 at 9.0 $\mu g/m^3$, was set by the EPA “to protect millions of Americans from harmful and costly health impacts, such as heart attacks and premature death. Particle or soot pollution is one of the most dangerous forms of air pollution, and an extensive body of science links it to a range of serious and sometimes deadly illnesses. EPA is setting the level of the primary (health-based) annual PM2.5 standard at 9.0 micrograms per cubic meter to provide increased public health protection, consistent with the available health science.” Travis County’s 2023 $PM_{2.5}$ design value exceeds the NAAQS of 9.0 $\mu g/m^3$, meaning Travis County may be officially designated nonattainment as early as 2026.

$PM_{2.5}$ is a public health issue that must be analyzed and addressed fully. Each of the three monitors in the Central Texas region, including on North I-35, is located in a densely populated area. Requests to consider removing data from said North I-35 monitor, due to construction activities near the site and “unrepresentative” values from highway emissions, would remove from consideration important public health data given that there are people living and working near the site whose health is impacted by high levels of $PM_{2.5}$. The “temporary” nature of those construction activities does not negate their impact on population health for people living and working nearby. The “unrepresentative” nature of highway emissions does not negate their impact for people living and working nearby. An extensive body of scientific research has shown that proximity to roads and to roadway construction has real and documented health impacts on those living and working nearby. In many instances these are low income and/or communities of color, who are already health-burdened and more susceptible to health consequences from air pollution (Samuels and Freemark 2022).

“Qualified exceptional events,” such as wildfire events from Central and South America and Saharan dust events, are likewise impactful to population health and thus must be considered when reviewing $PM_{2.5}$. We have seen a recent rise in these so-called “exceptional” events, which are becoming more routine and less exceptional by the day. Their “temporary” or “exceptional” nature does not apply to their impacts to population health.

$PM_{2.5}$ has been causing health impacts to our residents for many years, and now that the EPA has lowered the NAAQS, we must recognize how poor our air quality has gotten and the responsibility on us to rectify it for the benefit of our population. All current $PM_{2.5}$ monitors should remain in place to create a robust historical and future record of air quality levels. An inappropriately granted attainment designation due to removing a monitor, and skewing the data, will do nothing to improve our population health and prevent our children, elderly, and vulnerable residents from experiencing air pollution induced illnesses and comorbidities.

Thank you for your consideration of our comments and for your work to keep Texas air clean and healthy. We hope that TCEQ will act in favor of our population's health and in accordance with the scientific data provided by the region's three $PM_{2.5}$ monitors. If our area is designated attainment for $PM_{2.5}$ it should be because our air quality has improved and meets the health-based standard.

Thank you,

Heyden Black Walker

Co-Founder and Chair of the Board of Directors
Reconnect Austin