

# MORE THAN BAD AIR: THE MENTAL WEIGHT OF LIVING ON THE FENCELINE



Lived experiences narrated by SETx fence-line residents.

## WHY NOW?

Many people in Southeast Texas live near oil refineries and chemical plants. The air outside can contain harmful chemicals. Even when you cannot see or smell anything, those chemicals may still be there. People who live near these plants do not just worry about getting sick. They also feel stressed, scared, and exhausted. They worry every day, wondering if it is safe to open a window, let their kids play outside, or even breathe the air inside their own home.

## WHAT WE DID

Sitting down with 54 neighbors in Southeast Texas for group conversations, the team listened to what people shared about living near chemical plants. Participants also completed surveys about what they do on days where air quality is poor. The team worked closely with Habitat for Humanity Jefferson County, which helped connect them with community members. The conversations happened in Fall and Winter 2025.

## WHO WAS INVOLVED?

We gratefully acknowledge Habitat for Humanity Jefferson County for facilitating community partnerships.

## FINDINGS

- Most neighbors do what they can to protect themselves at home, running air purifiers, and shutting windows, but still do not feel safe inside and is another source of worry.
- Core protective behaviors remained consistent across demographics, but monitoring strategies diverged by age and resources, apps for older adults, symptom surveillance for parents.
- 7 out of 10 people do not leave their homes when the air quality is poor. For them, home is the only option, even when it feels like it is not enough.
- The stress is real and constant. About 1 in 5 things people said indicated signs of genuine fear or distress, and parents felt it most when talking about their kids.

**75%** run an air purifier at home

**72%** shut windows when they smell something

**72%** have no way to leave when air gets bad

**66%** take medicine early, just in case

*What people do on bad air quality days*

*"Emotionally and psychologically, it is not healthy."*

Talking about living next to the tanks

*"The smell comes inside."*

On bad air getting into the home

*"She can remember being in the bed and putting the pillow over her face so she could not smell some of the things."*

On trying to escape the smell inside the home

*"Those chemicals we don't see... those are the ones that scare me the most."*

On not knowing what is in the air

*"I gotta get whatever it is off of me. I don't know what it is, but it feels weird."*

On the feeling of physical contamination

*In their own words*

## MORE ABOUT SETX-UIFL

The Southeast Texas Urban Integrated Field Lab (SETx-UIFL) is one of four projects funded in 2022 by the U.S. Department of Energy to study how climate, environment, and urban changes affect cities. A team of over 80 researchers from UT, Lamar University, Texas A&M, Prairie View A&M, Oak Ridge National Lab, and Los Alamos National Lab has collected data and conducted modeling across hazards including flooding, hurricanes, heat stress, and air quality. Our Why: Southeast Texas faces numerous hazards, yet smaller communities like this one have often felt forgotten compared to larger cities. The SETx-UIFL was designed to explore the complex dynamics of disaster vulnerability for this economically and culturally vibrant region. We believe Southeast Texas is a bellwether for the entire Gulf Coast, and an exemplar for strategies that protect people and places. We hope this effort supports your path toward lasting resilience.



**JUAN P. MAESTRE**

University of Texas at Austin

Juanpedro.maestre@utexas.edu

