CHATTER: Community Health Air Toxics Tracking & Environmental Report

Air Pollution and Health Risk in the Beaumont and Port Arthur Area

2026-11-12

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1 Beaumont / Port Arthur

This report reproduces the main (home) page of the CHATTER website — the summary page: one row per monitor. The per-location pages, the Air Tracker map and the Data, Methods & FAQ page (with the downloadable data file) are on the website only.

CHATTER — the Community Health Air Toxics Tracking & Environmental Report — is a tool that shows how air pollution levels change over time and what those changes could mean for people's health in the Beaumont, Port Arthur area. While air pollution affects everyone, communities nearer industrial sources experience higher levels of hazardous air pollutants and the associated human health risk than those that are not.

CHATTER helps determine whether air pollution levels measured at local monitors may be high enough to affect human health and whether additional action may be needed to reduce exposures. **Screening levels** are air pollution concentrations or thresholds that scientists use to identify when long-term exposure may increase the risk of health problems. Exceeding a screening level does not mean health effects will occur, it indicates a need to take additional steps like verifying measurements or taking pollution reduction actions to protect health.

The health risks CHATTER show apply to a resident living in the area breathing air pollution for a long time.

CHATTER displays three groups of air pollutants that are monitored in Beaumont/Port Arthur:

1. **Cancer Risk Air Pollutants**: these are hazardous air pollutants that increase the lifetime risk of developing cancer.
2. **Other Health Risks Pollutants**: these are hazardous air pollutants that increase the risk of other health conditions — for example heart, breathing, immune, and reproductive effects — other than cancer.
3. **EPA Criteria Pollutants**: these are six common air pollutants regulated under the Clean Air Act for which the EPA has set National Ambient Air Quality Standards (NAAQS) because they can affect people's health. Four of these common air pollutants are measured at monitors near this community.

The first two groups are of greater concern to communities living near industrial areas, where hazardous air pollutants are released. The third group consists of widespread pollutants found throughout the United States.

A reference map is included showing the locations of the monitors. Figures in CHATTER reports are based on air monitoring data from these locations. If you are interested in better understanding potential sources of air pollution at these locations, visit EDF's AirTracker tool.

For more on definitions or how air monitors work, what a screening level is, how EPA sets them, and which statistics CHATTER uses, see the Frequently Asked Questions on the Data, Methods & FAQ page, which also says where the data come from, how each number is calculated, and offers a downloadable file of every value on this site.

1.1 How to read the plots

The figures below are **heat maps**. On this page each figure covers the whole area at once: each **row** is a monitor, each **column** is a period of time, and the number in each square is the level measured at the location divided by the health-based limit, written as a multiple with an "x." **1.0x** means the level sits exactly at the limit; **0.5x** is half the limit; **3.0x** is three times the limit. The color legend beside each plot shows what those multiples mean. The darker the color the greater the value. A number followed by an **asterisk** (for example **1.72x***) rests on thinner data: between 60% and 75% of the possible hourly readings for that period were available. Periods with less than 60% are left blank rather than shown.

Cancer Risk Pollutants shows each monitor's combined cancer total — its two cancer risk pollutants, each compared against its Screening Level and then added together. For example, Beaumont-Downtown's 2024 total reads **2.90x**, which falls in the **Screening Level (acceptable)** band; on the Cancer Risk by Location page that splits into 1,3-butadiene at **1.72x** and benzene making up the rest.

Other Health Risk Pollutants shows each monitor's total across all thirteen of those pollutants. Every value here is well below **1.0x**, so these rows appear in the palest shade.

EPA Criteria Pollutants works differently: it compares the **EPA design value** against the National Ambient Air Quality Standard rather than a screening level, and it covers ten regulatory monitors rather than two. A **design value** is a number calculated from air monitoring data that represents pollution levels in an area and is used to determine whether the area meets an air quality standard. Below **1.0x** is within the standard.

A fuller explanation is in the Frequently Asked Questions on the Data, Methods & FAQ page, and each group's own page has a worked example.

1.2 Monitor locations

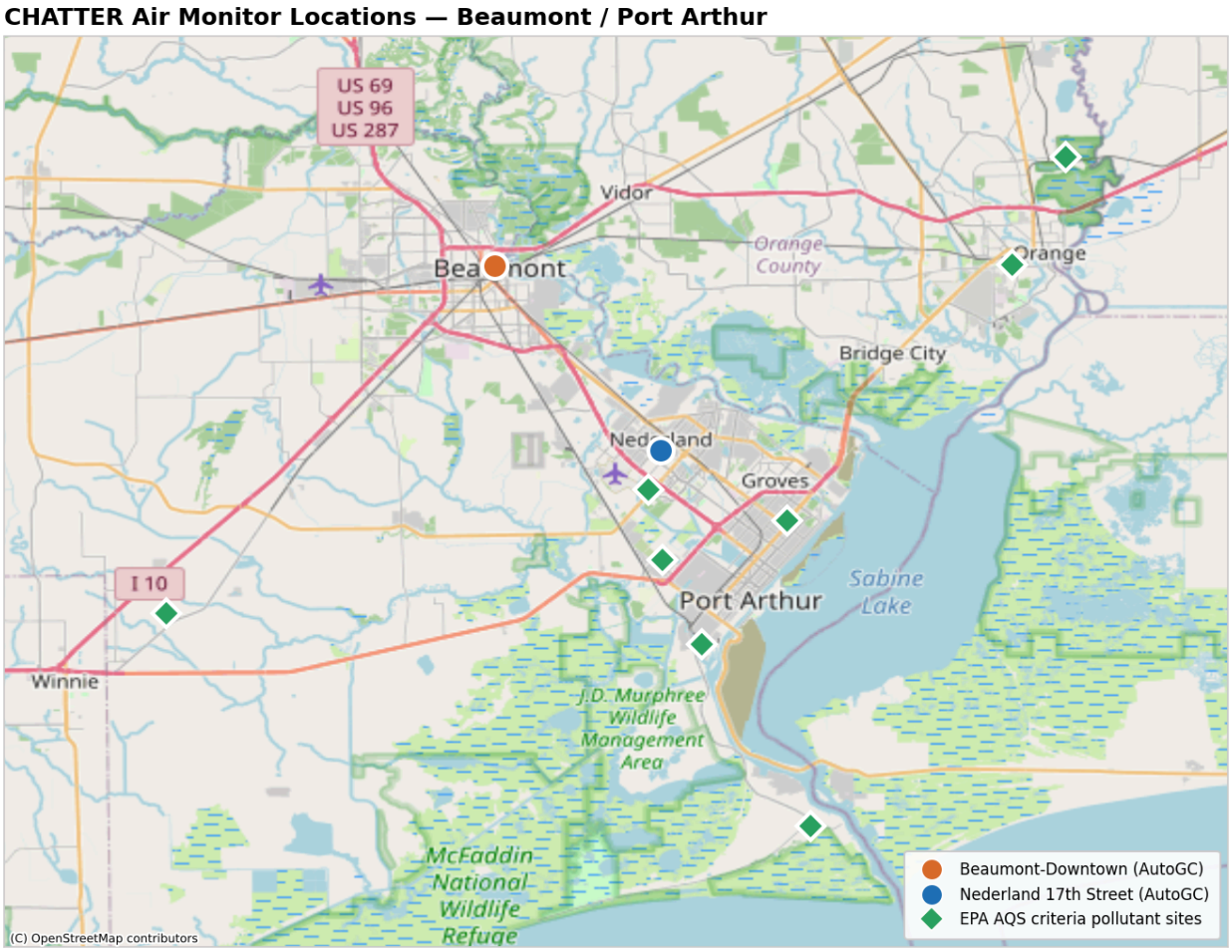


Figure 1: Air monitor locations — Beaumont / Port Arthur AutoGC and criteria-pollutant monitors

1.3 Cancer Risk Pollutants

One row per monitor. Each cell is the monitor's **combined cancer total** for that period: the measured **average level** of each cancer risk pollutant (1,3-butadiene and benzene) divided by its **Screening Level**, then added together. A value below **1.00x** is below the screening level; above **1.00x** means the combined level exceeds it. Read down a column to compare the two monitors, or across a row to see how one monitor has changed.

To see the individual pollutants behind each total, visit Cancer Risk by Location, where every monitor has its own card.

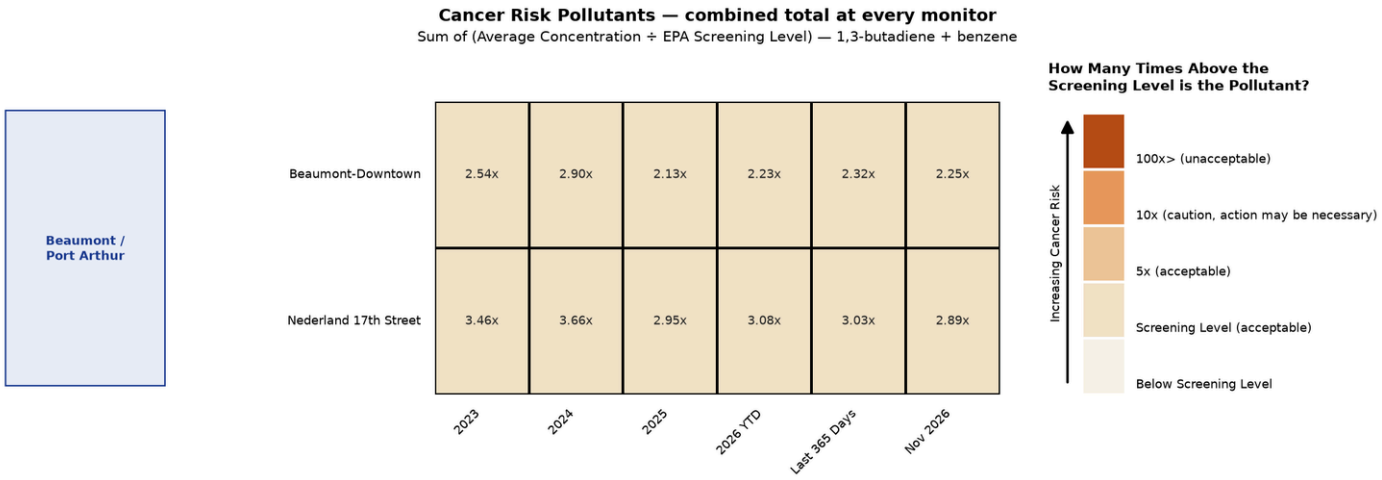


Figure 3: Cancer risk pollutants — combined total at every monitor
Figure 2

1.4 Other Health Risk Pollutants

One row per monitor. Each cell is the monitor's **total** across all thirteen other-health-risk pollutants for that period: each pollutant's average level divided by its screening level, then added together. A screening level is the concentration at or below which EPA does not expect health effects. Every total sits well below **1.00x** and appears in the palest shade; a darker cell would mark a monitor and period worth a closer look on the detail pages.

To see the pollutants one by one, visit Other Health Risks by Pollutants and Location.

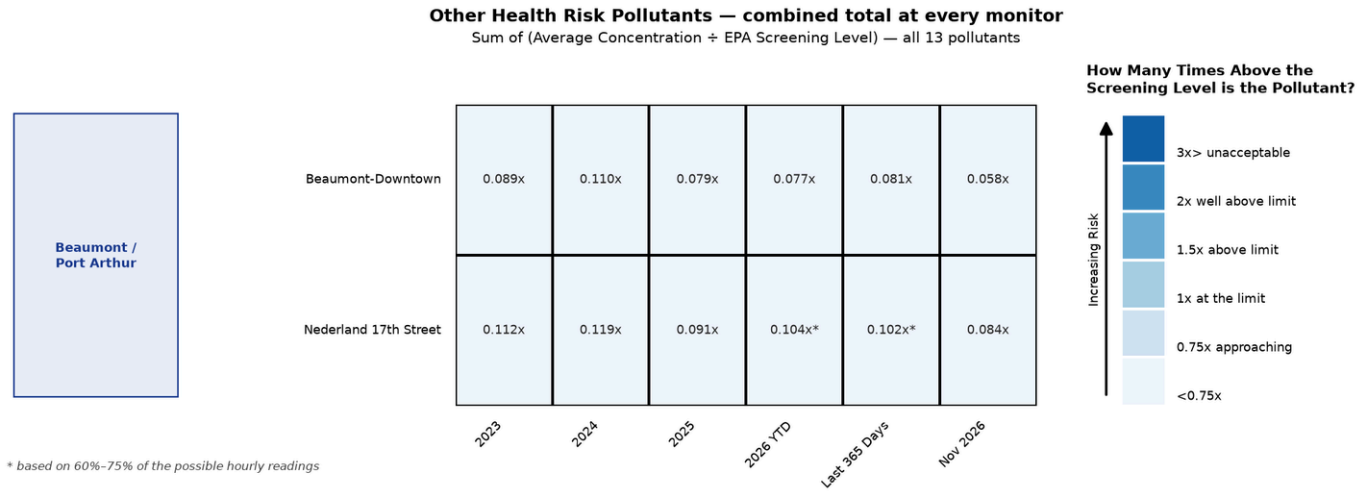


Figure 5: Other health risks — combined total at every monitor
Figure 4

1.5 EPA Criteria Pollutants

The Clean Air Act names six **criteria pollutants** — common air pollutants regulated under National Ambient Air Quality Standards (NAAQS). Four of them are measured at the ten TCEQ regulatory monitors near the Beaumont, Port Arthur community: ozone (O_3), fine particles ($PM_{2.5}$), nitrogen dioxide (NO_2) and sulfur dioxide (SO_2).

The figure has one panel per pollutant, with every site as a row; a hatched row means that site does not measure that pollutant. Each cell is the site's **EPA design value** — the statistic EPA uses to judge that pollutant against its standard — divided by the **NAAQS**. Below **1.00x** is within the standard; above **1.00x** is over it. Completed years are EPA's own published single-year values; the most recent columns, which EPA has not published yet, are calculated by CHATTER

from EPA's daily data. None of these are EPA's official three-year determinations. EPA releases this data weeks to months late, so the last three columns say which month they end in.

How each design value is calculated, the standards used, and a card for every site are on the EPA Criteria Pollutants by Location page.

This is the identical figure shown on the website's first page — one panel per pollutant, every criteria monitor as a row. On a printed page the cell numbers are smaller than on screen.

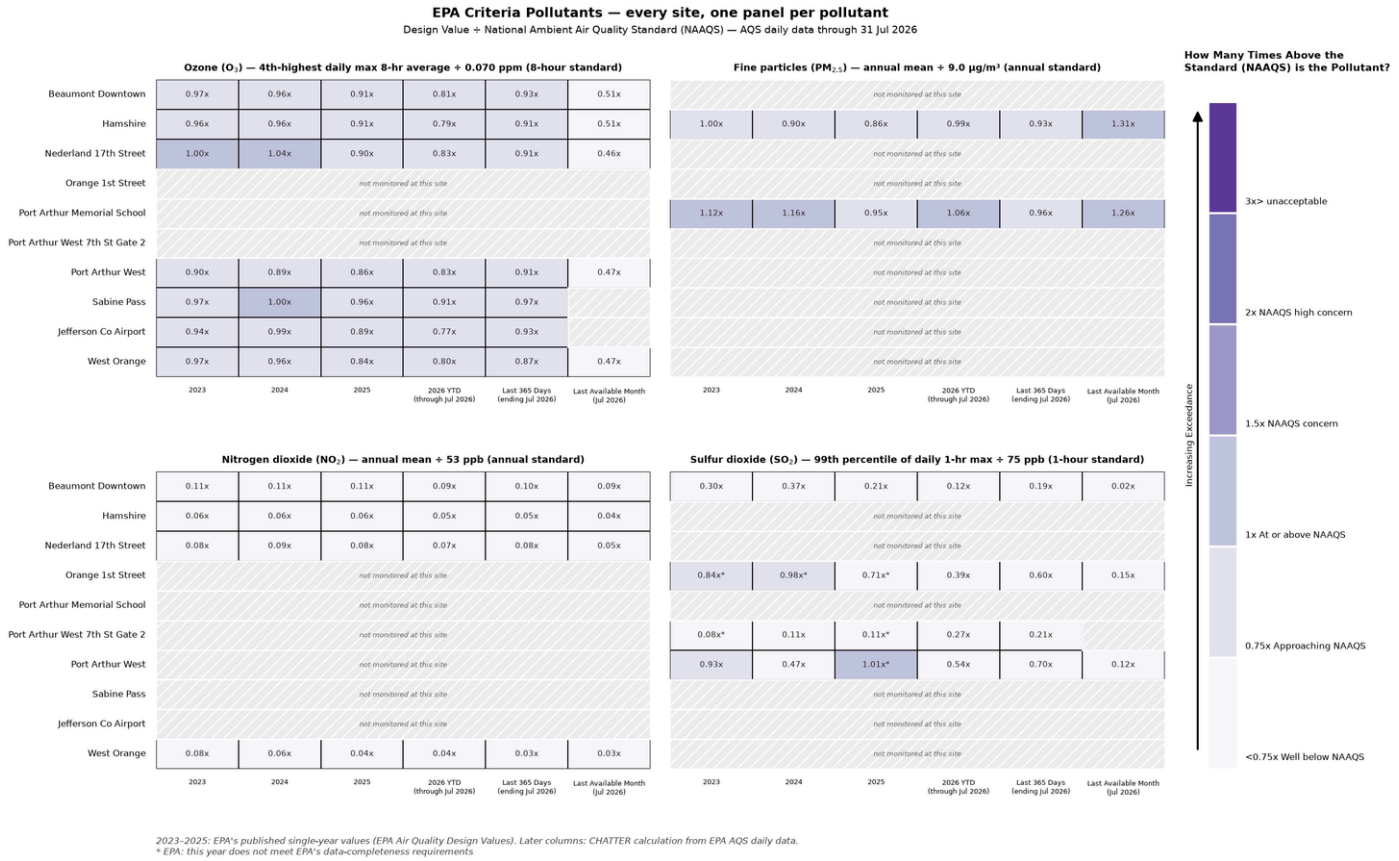


Figure 7: Criteria pollutants — all monitors

Figure 6

Data through 2026-11-11. Figures and text in this report come from the same source files as the CHATTER website.

1.6 About this project

Figure 8: StatAnalytics IDD, LLC; Environmental Defense Fund

Beaumont / Port Arthur CHATTER (Community Health Air Toxics Tracking & Environmental Report) was developed by **StatAnalytics IDD, LLC** in collaboration with **Environmental Defense Fund (EDF)**. CHATTER follows the prototype developed by the **Houston Health Department**.

Funding. The work of StatAnalytics IDD, LLC and Environmental Defense Fund on CHATTER was supported by a Wellcome Trust grant awarded to Environmental Defense Fund [grant reference number: 228257/Z/23/Z].

Data sources. Texas Commission on Environmental Quality (TCEQ) AutoGC monitors; U.S. EPA Air Quality System (AQS) and EPA Air Quality Design Values; screening levels from EPA Regional Screening Levels (RSLs); health effects from EPA's Integrated Risk Information System (IRIS). Full citations are on the Data, Methods & FAQ page of the website.

Disclaimer. CHATTER values are screening comparisons for public information. They are not regulatory determinations, and exceeding a screening level or standard does not by itself mean that health effects will occur.

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Suggested citation. StatAnalytics IDD, LLC, and Environmental Defense Fund (2026). *Beaumont / Port Arthur CHATTER: Community Health Air Toxics Tracking & Environmental Report.* https://statanalyticsidd-gh.github.io/Beaumont-PortArthur/