



What You Can Do To Reduce Air Toxics

Organize or Join an Existing Local Organization, such as Brazoria County Citizens for Clean Air & Clean Water.

- Hold regular meetings and bring in speakers to talk about different issues, such as the Air Exchange created by the Galveston-Houston Association for Smog Prevention and Mother's for Clean Air

Find Out More About What's Going On In Your Community

- Request a cancer or birth defect study from the Department of State Health Service, such as the Nueces County birth defect study conducted for the local group Citizens for Environmental Justice
- Conduct a health survey in industrial neighborhoods
- Record a pollution log, keeping track of industrial upset events and immediate health effects

Make Your Voice Heard

- Write letters to the editor and opinion-editorials about timely issues
- Meet with your local policy makers

Clean Up Dirty Diesels

- Meet with your local school board and policy makers to see if there are ways to retrofit dirty diesel school buses and city transit buses – hold a school Retro-fit party to raise \$

Important Numbers

Texas Commission on Environmental Quality Complaint Hotline: 1 (888) 777-3186

Brazoria County is part of the TCEQ's Region 12

Regional Director: Donna Phillips

5425 Polk St., Ste. H

Houston, TX 77023-1452

(713) 767-3500 FAX (713) 767-3520

EPA Emergency Hotline 1 (800) 424-8802

Air Risk Hotline: 1 (919) 541-0888

Provides detailed technical assistance and general technical guidance on matters pertaining to health, exposure, and risk assessment of toxic air pollutants.



Air Toxics: What you don't know CAN hurt you

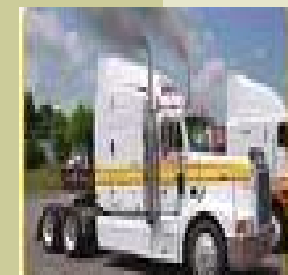


What are Air Toxics?

Air Toxics are the 188 hazardous air pollutants (HAPs) identified by the 1990 federal Clean Air Act amendments as pollutants known or suspected to cause cancer or other serious health effects.



Air Toxics are known or suspected to contribute to various cancers, such as leukemia, as well as birth defects, reproductive and developmental problems, immune system disorders, and respiratory and neurological diseases.



We cross paths with air toxics everyday; they are a harmful byproduct of our modern society. The major sources of air toxics are industrial facilities, such as refineries that produce our gasoline and fossil-fueled power plants that make our electricity.



Transportation and construction equipment are also large sources of hazardous air pollution. Long-haul trucks, tractors, buses, trains, and boats all spew diesel particulate matter that is a toxic soup made up of 40 air toxics, including 15 carcinogens.

We can live in our modern world without being poisoned from air toxics. Solutions exist that will significantly reduce the public's exposure to hazardous pollutants. Decision-makers must require these solutions are put in place, while citizens must hold the decision-makers accountable and industries need to act in a socially responsible manner.



Brazoria County & Air Toxics



Brazoria County Fast Facts, Compared to ALL U.S. Counties

- 1st** – for the most releases of **dioxins** that can alter the growth and development of cells and lead to adverse effects on reproduction and development, suppression of the immune system, and cancer
- 4th** – for the most air & water releases of **carcinogens**
- 11th** – for the most air & water releases of **reproductive toxicants**
- 22nd** – for the most air & water releases of brain-damaging **neurotoxicants**
- 29th** – for the most air & water releases of **developmental toxicants**
- 74th** – for the most air releases of **respiratory toxicants**

Brazoria County State of the Air 2006 Ozone Grade: F Populations at Risk

- Pediatric Asthma: 6,368
- Adult Asthma: 14,114
- Chronic Bronchitis: 7,972
- Emphysema: 2,835
- Cardiovascular Disease: 59,711
- Diabetes: 12,482
- Total Population: 271,130
- Population Under 18: 75,183
- Population 65 and Over: 23,494

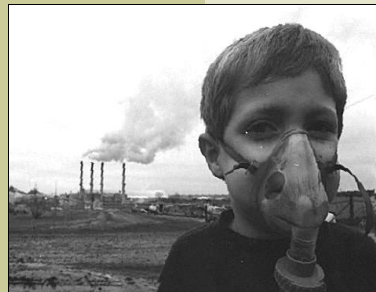
Source: American Lung Association 2006 State of the Air Report

Brazoria Co. Cancer Incidence Rates Statistically Significantly Higher than State

Profile of Cancer Incidence (Top 5 Leading Types of Cancer)

1999 through 2003	Male				Female			
	Cases	County Rate	State Rate		Cases	County Rate	State Rate	
Prostate	742	174.0*	149.9	Breast	709	132.6*	119.3	
Lung	454	104.7*	93.0	Lung	330	65.0*	51.1	
Colon & Rectum	289	68.0*	59.9	Colon & Rectum	235	46.7	41.7	
Bladder	167	42.5*	29.9	NHL	99	19.4*	15.7	
Oral Cavity & Pharynx	106	20.9*	16.2	Uterus	86	15.9	18.8	
All Sites	2,735	615.9*	542.4	All Sites	2,252	428.7*	389.5	

Rates are average annual per 100,000 population and are age-adjusted to the 2000 US standard population. An asterisk appearing next to the county rate indicates that the rate is statistically significantly different from the state rate. Significance tests were not race-adjusted, therefore significant differences could be due to a different race/ethnic distribution in the county relative to the state. Source: DSHS Texas Cancer Registry 1995-2003 Incidence File as of 12/23/2005.



Source: Sierra Club

According to the Dept. of State Health Services, the hospital admission rate for **Chronic Obstructive Pulmonary Disease** in Brazoria County is significantly higher than that for the State of Texas.



Air Toxics From Diesel Exhaust



Texas Consumes More Diesel Fuel Than Any Other State to Power:

- On-Road Diesel Engines
- Light & Heavy Duty Trucks
 - City Transit Buses
 - Passenger Cars
 - School Buses



- Off-Road Diesel Engines
- Construction & Farm Equipment
 - Prime & Standby Engines
 - Marine Vessels
 - Trains

Diesel particulate matter (DPM), otherwise known as soot, is the most deadly component of diesel exhaust. DPM is categorized by its size: ultra fine particles <0.1 µm, fine particles <2.5 µm, and coarse particles 2.5 µm up to 10 µm. The average human hair is 30 times larger than the largest fine particle, PM 2.5. These small particles easily pass through the throat and nose and into the lung tissue and bloodstream, carrying toxic substances with them. Particle pollution is linked to premature death, cancer, asthma, breathing difficulty, Sudden Infant Death Syndrome (SIDS), chronic obstructive pulmonary disease (COPD), pneumonia, chronic bronchitis, and stroke.

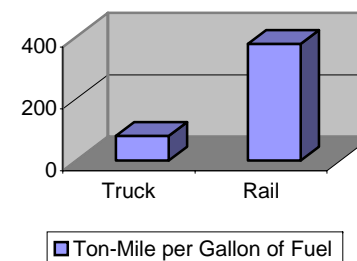
How Brazoria County Ranks Statewide & Nationally in Health Impacts from Diesel Fine Particles in 1999, (Source: Clean Air Task Force)

DPM Risk Rank out of 254 TX counties	DPM Risk Rank out of 3,109 U.S. counties	County	Times Above EPA's Acceptable Cancer Risk Level
1	14	Jefferson	865 X
2	17	Harris	742 X
5	102	Dallas	398 X
10	207	Brazoria	316 X
12	249	Travis	299 X
16	431	Bexar	257 X

The lifetime **cancer risk** from diesel soot in Brazoria County exceeds the risk of all other air toxics combined that are tracked by EPA. The average lifetime diesel soot cancer risk for a resident of Brazoria County is 1 in 3,164. This risk is 316 times greater than EPA's acceptable cancer level of 1 in a million.

With ships, trucks and trains coming in and out daily, Port Freeport is a breeding ground for diesel traffic. Brazoria County citizens have options to reduce their exposure to diesel emissions. The chart below shows that a freight train has much higher fuel efficiency than a truck, so replacing trucks with rail would reduce diesel emissions in the area. Two more solutions to reduce exposure to diesel exhaust include the use of ultra-low sulfur diesel fuel in conjunction with a diesel particulate filter (DPF) on trucks, buses and heavy construction equipment. The tractor on the left is retrofitted with a DPF. (Source: CATF)

Fuel Consumption Truck vs Rail



The combination of Diesel Particulate Filters (DPFs) and Ultra-Low Sulfur Diesel (ULSD) can achieve a 90% reduction in diesel particles.

