



Controlling Toxic Air Pollution in Michigan

Most of us place a high priority on maintaining and improving the quality of the air we breathe. We want to know that our air is free from "toxic" air pollutants that could harm us in any way. We don't want to take chances with our health and the health of our families.

This brochure answers some of the most commonly asked questions about "toxic" air pollution and describes what the Michigan Department of Environmental Quality is doing to improve and maintain our air quality.

What the Term "Toxic Air Pollution" Really Means ...

The term "toxic" conjures up thoughts of extremely hazardous substances which are not safe under any circumstances; however, as used by environmental regulators, the term has a much broader meaning. "Toxic" is a term used to describe a huge category of air pollutants which may be harmful to human health or the environment if they are present in sufficient amounts and/or for a long enough time. The risk to human health from an air pollutant termed "toxic" is determined by how much of the pollutant one is exposed to and the length of exposure. Under Michigan rules, a toxic air pollutant is also any air pollutant for which the federal government has not established ambient (or outdoor) air quality standards. Therefore, an air pollutant described as "toxic" does not necessarily pose an imminent threat to people or the environment.

Sources of Toxic Air Pollution ...

Many different types of activities produce toxic air emissions in varying amounts. Activities such as industrial manufacturing,



energy production, burning of waste materials or wood, painting, dry cleaning and driving an automobile, to name just a few, all produce toxic air pollutants. Since many of these sources use special equipment to reduce their output of toxic air pollution, their effect on our air quality is minimized.

Some sources of air pollution are not obvious. Sources of toxic air pollution can be toxic-containing water or soil. Toxics can transfer from water to air and from soil to air and vice versa. To further complicate matters, toxics can also travel in the air from region to region affecting the quality of air in a location far from where the pollution actually occurred. Therefore, the quality of air in Michigan is affected by toxics in water and soil, toxic air emissions in other states and countries, as well as toxic air emissions from local industry, incinerators, open burning, cars and trucks and other sources.

How Toxic Air Pollution is Controlled ...

Toxic air pollution in Michigan is controlled under two sets of regulations: 1) state administrative rules and 2) the federal Clean Air Act, as amended.

Michigan Regulations ...

The Department of Environmental Quality takes its role in environmental protection very seriously. Under the leadership of the DEQ, Michigan has enacted clear, comprehensive rules for the control of toxic air pollution. According to Michigan's rules, all known substances can be regulated as toxic air contaminants (except for 40 substances which have been specifically excluded because they are regulated elsewhere in the law or are considered relatively non-toxic). These rules apply to all new sources of air pollution which, under Michigan regulations, must obtain an air permit, and to existing sources seeking to modify their facilities. Michigan's air toxics rules take precedence over the federal



Clean Air Act regulations where the rules provide for stricter control of toxic air pollution. In addition, Michigan's rules are now in effect, whereas many of the toxic air pollution provisions of the federal Clean Air Act will take effect over a period of years up to the year 2000 and beyond.

Michigan's air toxics rules require two-fold protection. First, the rules require new or modified sources of air pollution to undergo an evaluation for toxic air pollution. Sources of toxic air pollution are required to evaluate and use the best economically-feasible, technologically-advanced air pollution controls. This means that, as technology progresses and new and better air pollution controls continue to be developed, each new or modified source will be required to consider the newest and best technology. Second, DEQ engineers review the permit application to determine the amount of toxic air pollution the facility might possibly emit even after the best controls are installed. The facility is required to limit its toxic air emissions to amounts at or below those deemed safe for each toxic air pollutant. Again, as knowledge and technology progress, these limits will be continually reviewed for each toxic air pollutant and changed, if necessary.

Federal Regulations ...

The federal Clean Air Act (CAA) was significantly amended in November of 1990. These amendments contained major new provisions for control of toxic air contaminants. The revised CAA requires regulation of 189 toxic chemicals. The U. S. Environmental Protection Agency may add chemicals to or delete chemicals from this list.

Other provisions of the revised CAA require major sources of toxic air pollution to use "maximum achievable control technology." This will ensure that both new and existing major sources of toxic air pollution will use the kind of technology which provides maximum control of toxics on an ongoing basis. However, the federal government must work out the details of what kinds of controls qualify as the "maximum control" for each type of air toxic source (such as coke ovens, dry

cleaners, degreasers, etc.). This will take time, and the exact regulations for each type of source will be phased in over a period of 10 years, with standards for all types of sources scheduled to be completed by the year 2000.

As with Michigan's toxics rules, the federal regulations require the additional precaution of establishing "residual risk" standards within 8 years after the establishment of the standards for maximum achievable control. These standards will set limits on the amount of toxic air pollution a source can emit even after maximum achievable controls are installed. The federal government may require sources of toxic air pollution to use additional controls over and above the controls required by maximum achievable control if necessary to protect public health and the environment.

The table below outlines the provisions of both Michigan's toxic air pollutant regulations and the federal CAA air toxic regulations:

	Federal CAA	Michigan Air Toxic Rules
Applies to new or Modified sources of toxic air contaminants (TACs)	YES	YES
Applies to existing sources of TACs	YES	NO
Which TACs Regulated?	At present, 189 chemicals (subject to change)	All known substances except the 40 specifically exempted
Effective Date of Regulations	Phased in between 1990 and 2000	In effect now
Types of Controls Required	Maximum Achievable Controls followed by residual risk standards, within 8 years	Best Available Controls, followed by immediate risk evaluation

How Toxic Air Pollution Affects the Great Lakes ...

As the Great Lakes State, Michigan has a vested interest in maintaining and improving their quality. The Lakes bring millions of tourist dollars annually into the state, and they provide a billion gallons of water per day for commercial and residential uses. Their value in maintaining the region's ecosystem is incalculable.



Research indicates that what is in the air may eventually find its way into the water. Scientists have estimated that a significant portion of the pollution entering the Great Lakes originates from the atmosphere. For example, as much as 90 percent of certain toxic pollutants in Lake Superior are estimated to come from polluted air. When toxic air pollutants are deposited into the Great Lakes, pollutants can build up in the food chain. Levels can be high enough in fish to result in advisories that warn people not to consume certain amounts of Great Lakes fish.

Because of these problems, the Clean Air Act amendments include a requirement to identify and measure the sources of these toxic pollutants entering the Great Lakes. Additionally, any adverse effects on human health and the environment must be determined and regulations will be required to prevent toxic pollutants from entering the Great Lakes.

You Can Reduce Toxic Air Pollution

The actions of individual people can have a big impact on our air quality. Try some of these ideas to do your part to reduce toxic air pollution:

CARS

Keep your auto properly maintained; use public transportation or carpool; walk or bicycle when possible.



ENERGY

Evaluate your uses of energy (electricity, natural gas, liquefied petroleum gas, fuel oil, gasoline) and conserve whenever possible.

BURNING

If you use a woodstove, choose a new EPA certified model (manufactured after July 1, 1990); operate the stove according to the manufacturer's directions; never burn trash (plastics, pressed wood and other materials emit toxic air contaminants when burned); eliminate open burning of leaves, branches, grass and brush by beginning a compost pile. Contact the DEQ Waste and Hazardous Materials Division, Solid Waste Program Section for information on composting.



HOUSEHOLD PRODUCTS

Minimize your use of pesticides, fertilizers and cleaners containing solvents; use such substances according to the manufacturer's directions; properly dispose of paints, solvents, cleaners, pesticides and other household substances containing anything considered poisonous to humans or animals. Call your local county health department for information on how to dispose of hazardous household products and for locations of hazardous household material collection sites.

REDUCE, REUSE AND RECYCLE!

To receive additional information, a permit application or detailed instructions for submitting a complete application, please contact a permit engineer at:

MI DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
PO BOX 30260, LANSING MI 48909
(800) 662-9278
www.michigan.gov/air

- or -

staff in the District Office which serves your area.



Dan Wyant Director
Rick Snyder, Governor