

Outdoor Air Quality Issues in Martindale-Brightwood

Introduction

Millions of people live in areas (primarily urban) where air pollution can cause serious health problems. Local air quality can affect our daily lives and similar to the weather, the condition of the air can change from day to day and season to season (U.S EPA AIRNOW).

Air pollution is a closely monitored environmental health concern within the City of Indianapolis and Marion County. Typically, people that are most at risk from air pollution are individuals with asthma or lung and/or heart disease. Children and the elderly population are also more vulnerable to fluctuations in air quality.



What are the main air pollutants in Martindale Brightwood?

The air in Martindale-Brightwood, as in most urban areas, contains many chemicals that contribute to air pollution. The U.S. Environmental Protection Agency (U.S. EPA) has requirements for two main categories of pollutants known as “criteria pollutants” and “hazardous air pollutants.” The criteria pollutants are ground-level ozone or (O₃), airborne particulates or particulate matter (PM), nitrogen oxides (NO_x), sulphur dioxide (SO₂), carbon monoxide (CO) and lead or (Pb). Criteria air pollutants are defined by the U.S. EPA as indicators of air quality. For each criteria air pollutant, the U.S. EPA has established a maximum concentration above which adverse effects on human health may occur. The U.S. EPA plan under which this is managed is called the National Ambient Air Quality Standard (NAAQS) program. Airborne particles are referred to as either “fine particulates” (PM_{2.5}) or coarse particulate matter (PM₁₀).

The second group of air pollutants is called “air toxics” or hazardous air pollutants (HAPs). Hazardous air pollutants include volatile organic compounds (VOCs), pesticides, herbicides, and other chemicals. Many of these chemicals are used for a variety of purposes in the United States today. These air pollutants come from many types of activities including gas stations, auto body shops, paint manufacturers and plating facilities. Other chemicals, although not in use today, were used extensively in the past and may still be found in the environment (U.S. EPA Air Toxics Web Site). Examples of VOCs are gasoline constituents, mineral spirits, degreasers and solvents. Additionally, other examples include cyanide, salts and heavy metals such as chromium, nickel

The main air pollutants are:

- Ozone
- Particulate matter
- Nitrogen oxides
- Sulfur dioxide
- Carbon monoxide
- Lead
- VOCs (gasoline, mineral spirits, degreasers, solvents)
- Pesticides
- Herbicides

and cadmium that become vaporized. Many of these chemicals are used in the daily processes at plating facilities, machine shops and automobile garages within or surrounding the Martindale-Brightwood area. There are many other chemicals that may also be in the air for which there are no standards or regulations. A list of helpful air quality web sites is provided in Appendix A.

How Does Air Pollution Affect Your Health in Martindale Brightwood?

Ground-level ozone and particulate matter (PM2.5 and PM10) are two common pollutants in Martindale Brightwood that pose the greatest threat to human health. Ground-level ozone, often referred to as “Smog,” can irritate your respiratory system, causing coughing, irritation in your throat or a burning sensation in your airways. It can reduce lung function, so that you may have feelings of chest tightness, wheezing, or shortness of breath. Additionally, ozone can aggravate asthma and trigger asthma attacks. People at greater risk from ground-level ozone are individuals with lung diseases, such as asthma, the elderly and children and adults who are active outdoors.

Particulate matter is microscopic solids or liquid droplets that are so small that they can get deep into the lungs and cause serious health problems. When exposed to these small particles, people with heart or lung diseases and older adults are more at risk of hospital and emergency room visits or, in some cases, even death from heart or lung disease. Even if you are healthy, you may experience temporary symptoms from exposure to elevated levels of particles. Symptoms may include irritation of the eyes, coughing and shortness of breath. Studies have shown that children living near busy streets and highways have lower lung function than those living farther away.

Health effects of air pollution:

- Coughing
- Throat and eye irritation
- Wheezing
- Chest tightness
- Shortness of breath
- Asthma attacks
- Heart attacks
- Lung diseases
- Cancer
- Reduced fertility and birth defects

People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. These health effects can include damage to the immune system, as well as neurological, reproductive (e.g., reduced fertility and birth defects), developmental, respiratory and other health problems. In addition to exposure from breathing air toxics, some toxic air pollutants such as mercury can deposit onto soils or surface waters, where they are taken up by plants and ingested by animals and are eventually magnified up through the food chain. Like humans, animals may experience health problems if exposed to sufficient quantities of air toxics over time (US EPA Toxic Air Pollutants).

What is the Air Quality in Martindale Brightwood?

Martindale Brightwood is fortunate to have an air monitoring station located in Washington Park (3120 E. 30th Street). The Indiana Department of Environmental Management (IDEM) operates the air monitoring station.

The monitoring station provides the most current hourly averaged data available. Air quality data for the Martindale-Brightwood area is available for ground-level ozone, black carbon particulate matter, sulfate PM_{2.5}, and temperature. This criteria pollutant information has been collected since 1998 (real time monitoring since December 16, 2008). Since April 6, 1999, this monitoring station has also collected HAP data. The air is monitored from the area surrounding the monitoring station. Unfortunately, there is no specific information available at a neighborhood level.

There are twelve (12) additional air quality monitoring stations located throughout metro Indianapolis and suburban areas and seven (7) stations in surrounding counties. Each air quality monitoring station collects its own specific air quality information.

For comparison purposes, ground-level ozone levels during the time period of July 2009 were evaluated from other air quality monitoring stations located at 6125 E. 16th Street, 1327 S. Harding Street, and 5753 Glenn Road in Fort Harrison State Park. Additionally, ground-level ozone levels were compared against readings noted from the Monrovia air quality monitoring station. The Monrovia station was chosen as a background source (i.e. upwind) outside of the city limits. The summer month of July was chosen because ground-level ozone should be more prevalent due to additional sunlight (longer days) and higher temperatures. Ground-level ozone readings are not available from the other surrounding air quality monitoring stations near Martindale-Brightwood. Additionally, PM_{2.5} readings from Washington Park were compared to those from the air quality monitoring station located at School No. 90 – 3351 W. 18th Street. The air quality monitoring station located at School No. 90 is the only other station that collects daily PM_{2.5} readings.

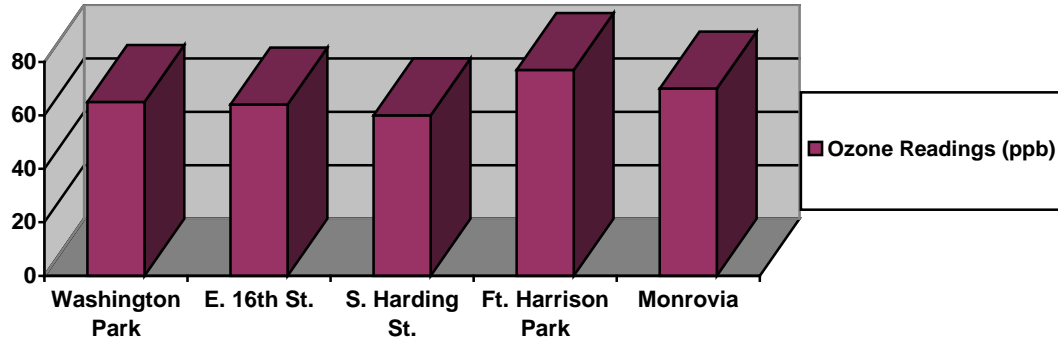


Ozone levels in Martindale-Brightwood typically are found in the good-to-moderate range in the summer months

Based on review of the ground-level ozone readings collected from each air quality monitoring station, ground-level ozone ranged from primarily good to moderate levels. The daily and monthly ozone readings were basically consistent from each location including the Monrovia air quality monitoring

station. As displayed by the graph below, on July 10, the highest ozone readings were recorded throughout central Indiana. Ozone measurements are in parts per billion or (ppb). The Washington Park air monitoring station recorded an ozone reading of 65 ppb as compared to the

E. 16th Street and S. Harding Street monitoring locations of 64 and 60 ppb, respectively. Interestingly, ozone readings were highest in the Monrovia and Ft. Harrison Park monitoring locations with 70 and 77 ppb, respectively. According to the Air Quality Index for ozone, levels below 59 ppb are considered good. Ozone levels above 96 ppb are considered unhealthy.



The comparison of PM2.5 levels from the air quality monitoring locations at School No. 90 and Washington Park also ranged in the good to moderate range. Particulate matter measurements are in micrograms per cubic meter or ($\mu\text{g}/\text{m}^3$). The monthly average was similar; however, School No. 90 had a higher maximum one-day PM2.5 reading of $242.60 \mu\text{g}/\text{m}^3$ as compared to Washington Park, which had a reading of $80.18 \mu\text{g}/\text{m}^3$. Typical readings were much lower and ranged from between $20\text{-}50 \mu\text{g}/\text{m}^3$.

Particulate matter pollution in Martindale-Brightwood typically falls in the good-to-moderate range

The City of Indianapolis Office of Sustainability reviews the ambient air quality data in and around Marion County for the criteria pollutants (CO, SO₂, ozone, NO_x, PM10, PM2.5, and lead). Air monitoring is conducted by the IDEM to assure compliance with these standards. The gaseous pollutants (CO, SO₂, and ozone) are measured 24 hours a day, 7 days a week by IDEM staff. The particulate type pollutants (PM2.5, PM10 and lead) are collected over a 24-hour period and measured once every day (PM2.5) to every 6th day (PM10 and lead).

Air pollution monitors on the north edge of the neighborhood historically have registered exceedances of the current PM2.5 standard. Data from 2006 and 2007 indicate that the average concentration of benzene is 11.5 times the U.S. EPA cancer benchmark concentration. Carbon tetrachloride is present 5.4 times and p-dichlorobenzene is present 3.4 times the benchmark. These are the only chemicals for which the U.S. EPA has set a cancer benchmark that were present in significant amounts. Other air toxics were present in varying amounts.

Benzene and other air toxics are found in Martindale-Brightwood at unhealthy levels above the U.S. EPA cancer benchmark

It should be noted that there are many air toxics for which we do not have very good information on human health effects and therefore cannot do much to assess cumulative effects.

Where does the air pollution in Martindale Brightwood come from?

Air pollution in Martindale Brightwood comes from businesses, cars and trucks within the neighborhood, from other parts of Indianapolis, the nearby highways such as I-70, the central Indiana region and even from factories and power plants that may be hundreds of miles away. Although business and industry are typically associated with the main source of air pollution; there are also several other sources that can lead to air pollution. A majority of air pollutants come from vehicle emissions or exhaust, yard and recreational equipment, open burn piles, utility and commercial boilers, and smoke from our chimneys.

Most air pollution comes from cars, trucks, yard equipment, open burning, boilers and smoke from chimneys

Sources of HAPs consist of permitted commercial/industrial facilities and smaller non-permitted facilities such as gasoline stations, auto body/repair garages, dry cleaners, and off-road machinery. Currently, there are approximately seventy (70) active industrial facilities that operate within or border the Martindale Brightwood area.

Most hazardous air pollution comes from businesses and industries, including gas stations, auto shops, dry cleaners and off-road machinery

In the Martindale-Brightwood vicinity there are eighteen (18) regulated or permitted facilities that emit air pollutants into the surrounding area. The table below provides information concerning each facility. Additionally, each regulated facility is depicted in the attached Air Permitted Facilities Map. The Air Permitted Facilities Map is a 2009 aerial photograph in which the location of each regulated facility is

designated by a red star and matches the corresponding Map ID. (Air Quality Map.pdf) A copy of the Air Permitted Facilities Map is also included in Appendix B.



Smaller, non-permitted facilities include approximately 5 active gasoline stations, 6 used car sales lots, 15 garages/body shops and 2 dry cleaner facilities operating within Martindale Brightwood. These figures are based on known or registered facilities and do not take into account unnamed home repair or garage facility operations that are large enough to require an air permit or registration. These businesses emit air pollution but are not required to have an air permit.

Of the 18 permitted facilities, we only have actual data on their air pollution emissions from five of the listed facilities. At this time, the most recent air emission data available is from 2007. This may be due to either the lack of information submitted to the State or small quantities of air pollutants emitted. Commercial Finishing and IVC Industrial Coatings have air emission data available on the IDEM air emission inventory because of permitting requirements under the Title V permit. IVC Industrial Coatings, Interstate

Castings, Major Tool & Machine, Inc. and Thomas & Skinner, Inc. emission data are listed within the U.S. EPA Toxic Release Inventory (TRI) web site.

Map ID	Company Name	Street Address	Permit Level	Permitted / Regulated Pollutant (s)
1	Williamson Polishing & Plating Co., Inc.	2080 Dr. Andrew J. Brown Ave.	MSOP	Chrome (HAP)
2	Burgess Plating & Polishing	1051 E. 19 th St.	MSOP	Total PM and single HAP
3	Commercial Finishing, Corp.	1125 Brookside Ave. Suite B	Title V	PM, HAPs, and VOCs
4	Thomas & Skinner, Inc.	1120 E. 23 rd St.	MSOP	Total PM
5	John M. Wooley Lumber Co, Inc.	1118 E. 30 th St.	R	Total PM
6	Zimmer Custom-Made Packaging	1450 E. 20 th St.	MSOP	PM and VOCs
7	Commercial Finishing, Corp.	4001 E. 26 th St.	MSOP	PM and VOCs
8	R&S Plating, Inc.	2302 Bloyd Ave.	MSOP	VOCs and single HAP
9	Metal Finishing Co., Inc.	3901 E. 26 th St.	MSOP	PM and HAPs
10	Antique Chrome Shop	1925 E. Massachusetts Ave.	MSOP	Total PM and single HAP
11	Taylor Tire Treading Co.	2101 E. Massachusetts Ave.	E	Not Applicable
12	Irving Materials, Inc.	2120 Hillside Ave.	SSOA	Total PM
13	Interstate Castings	3823 Massachusetts Ave.	FESOP	CO, PM, PM10, PM2.5, and HAPs
14	Major Tool & Machine, Inc.	1458 E. 19 th St.	FESOP	PM, PM10, PM2.5, and VOCs, HAPs
15	IVC Industrial Coatings	2245-2250 Valley Ave.	Title V	Total PM, HAPs, VOCs
16	Elliot Williams Company, LLC	3500 E. 20 th St.	E	Not Applicable
17	Colorcon, Inc.	3702 E. 21 st St.	E	Formerly total PM
18	Indiana Veneers	1124 E. 24 th St.	MSOP	PM
Permit Level Information				
E=Exemption (below permitting thresholds)			R=Registration-Emission Threshold	
FESOP=Federally Enforceable State Operating Permit			SSOA=Source Specific Operating Agreement	
MSOP=Minor Source Operating Permit			Title V=Title V Operating Permit	

Each facility reports the amount of chemicals released from two separate categories: “Fugitive Air Emissions” and “Point Source Emissions.” Fugitive air emissions are all releases to air that are not released through a smoke stack, pipe or other confined air stream. Fugitive emissions include equipment leaks, evaporation from surface impoundments and spills, and releases from building ventilation systems. Point source emissions or stack air emissions occur through confined air streams such as stack, vents, ducts, or pipes (U.S. EPA TRI Database).

According to the 2007 IDEM air emission inventory, Commercial Finishing emitted 0.4 tons of CO, 0.5 tons of NOx and 6.1 tons of VOCs. No specific VOC information was listed in the U.S. EPA TRI database. IVC Industrial Coatings emitted 0.2 tons of PM10, 0.1 tons of PM2.5, and 11.4 tons of VOCs. Based on a review of the U.S. EPA TRI database, a portion of the specific VOCs emitted was reported. IVC Industrial Coatings released a total of 2,756 pounds of glycol ethers, 1,075 pounds of toluene, and 1,961 pounds of total xylenes.

Interstate Castings was listed as an emitter of lead in the U.S. EPA TRI database but no zero lead was emitted based on report review. Major Tool & Machine, Inc. emitted 101 pounds of chromium, 53 pounds of cobalt, 10 pounds of copper, 6 pounds of lead, 26 pounds of

Manganese, and 161 pounds of nickel. Thomas & Skinner, Inc. is an emitter of cobalt and nickel but the emission amount was listed as “Not Available” within the U.S. EPA TRI database.

Brulin Corporation, located at 2920 Dr. AJ Brown Avenue, was listed in the U.S EPA TRI database as an emitter of glycol ethers (23 pounds) and N-Methyl 2-Pyrrolidone (4 pounds); however, the facility is not listed as a permitted facility within the city Office of Sustainability or the IDEM.

Based on a review of available air emissions data, IVC Industrial Coatings is the largest emitter of PM2.5, PM10 and total VOCs. Commercial Finishing Corp. is the largest known emitter of CO and NOx. Reportedly, Major Tool & Machine, Inc. is the only listed emitter of lead. There was no available data to determine emissions of SO₂.

Largest Industrial Emissions of Air Pollutants in Martindale-Brightwood	
IVC Industrial Coatings	Particulate Matter (PM2.5 and PM10) and Volatile Organic Compounds (VOCs)
Commercial Finishing Corp.	Carbon Monoxide and Nitrogen Oxides
Major Tool & Machine, Inc.	Lead

According to the Office of Sustainability, Marion County has 257 air-permitted facilities, based on available data from February 2009. The Martindale-Brightwood area contains 18 air-permitted facilities and accounts for approximately 6 percent of the total regulated facilities within the City of Indianapolis.

From December 1987 through August 2008, the City of Indianapolis has recorded six complaints in Martindale-Brightwood involving odor (indoor-outdoor), smoke and dust issues related to the permitted facilities listed above. These are not all of the complaints in the Martindale-Brightwood area, but only the complaints against the permitted facilities. All available complaint records were obtained from the Office of Code Enforcement and Marion County Health Department. No other complaint records were available from the city or county.

Eleven of the 18 registered facilities have listed non-compliance or a Notice of Violation (NOV) history. Thomas & Skinner, Taylor Tire Treading Co., Antique Chrome Shop, Metal Finishing Co., Inc. and Indiana Veneers have each received a failure to submit annual notifications. Williamson Polishing and Plating, IVC Industrial Coatings, Major Tool & Machine, Inc., Commercial Finishing, Interstate Castings and R&S Plating, Inc. have received record keeping/inspection violations or compliance testing violations. In addition, IVC Industrial Coatings has received violations for improper use of equipment and for not conducting appropriate leak detection and repair inspections. R&S Plating, Inc. has also received violations for not operating/maintaining chrome electroplating tanks and improper ventilation systems.

According to the Indianapolis Office of Enforcement, there have been 84 reported air pollution complaints within the Martindale-Brightwood area. The air pollution complaints include the

following categories: industrial related, open burning, smoke/air pollution and dust. The table below further describes the nature of the air pollution complaints.

Air Pollution Complaints in Martindale-Brightwood (2005-2009)				
Zip Code	Industrial Related	Open Burning	Smoke/Air Pollution	Dust
46201	1	1	0	0
46205	1	6	1	1
46218	2	48	6	17
Total	4	55	7	18

Open burning had the greatest number of air pollution related complaints (55) followed by dust air issues.

Where can I find local information on air quality in my area?

Central Indiana uses an on-line tool called the Air Quality Index or AQI. This information is also provided in The Indianapolis Star. This on-line tool is hosted by the Indianapolis Department of Public Works (IDPW) and reports daily air-quality. The AQI is a national standard for reporting air quality and provides a daily score or glimpse at how much pollution is in the air and what health effects may be noticeable. As a general rule, a higher AQI value means higher air pollution levels (Office of Sustainability-sustainindy.org/air-quality).

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQIs in this range:</i>	<i>...air quality conditions are:</i>	<i>..as symbolized by this color:</i>
0-50	Good	Green
51-100	Moderate	Yellow
101-150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

The AQI website can be obtained at the following web site address:
<http://cms.indygov.org/aqi/default.aspx>.

Additionally, hourly air quality information and readings can also be checked by calling the air quality phone line at (317) 327-4AIR (247).

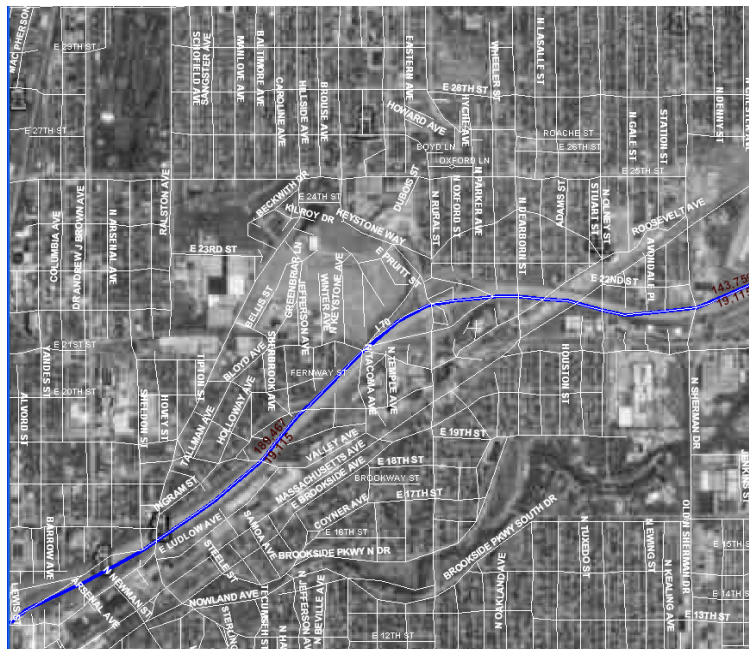
Air quality in central Indiana is determined by measuring four (4) pollutants. They are CO, SO₂, PM_{2.5} and ozone. The federal government standards limit the amount of these pollutants allowed in outdoor air.



How much do cars and trucks contribute to air pollution in Martindale Brightwood?

Vehicle emissions in Martindale Brightwood are generated from widely used streets and neighborhood roads/alleys to major interstates such as I-70. Interstate 70 and a major railroad line extend along the southern boundary of the neighborhood. The neighborhood is downwind from these sources. There is also a rail line on the western edge of the neighborhood. Major roads such as Dr. AJ Brown Avenue, Sherman Drive, Roosevelt Avenue, 25th Street and 30th Street see significant truck traffic. Additionally, more cars use the major roads in Martindale-Brightwood, which adds to the air pollution. Even idling cars and trucks contribute to the air pollution in the area. These are potential major sources of mobile-source air contamination. Of special concern are diesel railroad engines and large trucks on the interstate and streets.

The CARE project team estimated emissions along I-70 for the Martindale-Brightwood neighborhood. A 2007 estimated flow map indicated that for a 1.55 mile section of I-70 (Lewis to Keystone) there were 189,467 vehicles (daily) traveling this stretch of highway (19,115 were trucks); and for a 0.8 mile section (Keystone to Sherman) 143,759 vehicles traveled daily along this portion of highway (19,115 were trucks). It should be noted that emission estimates do change with vehicle speed. An estimate from the [Indianapolis Metropolitan Planning Organization's latest Air Quality analysis](#) (Marion County, page 97) shows the average speed on urban interstates is 43.48 mph. This value was used to estimate mobile



emissions for the area. The temperature and humidity values were inputted from the ozone analysis used in the State Implementation Plan. The values are for a typical summer day. Data containing the age of the vehicle fleet in the central Indiana area was also used. This is important when calculating emission factors; the older the fleet, the more pollutants per mile.

The ratio of trucks to cars is also important. For both segments the ratio is very close to the national average of 12%, so the national average default values were used. A majority of air toxics emissions are from evaporative emissions originating from refueling and from vapors escaping from the tank while parked.

The vehicle-miles traveled (VMT) that occurs on this 2.35 mile section is 408,681 daily vehicle-miles traveled (VMT). If the VMT is multiplied by specific emission factors (grams/mile), an approximate calculation of vehicles emissions (grams/day) can be approximated along the I-70 corridor that borders the Martindale-Brightwood neighborhood.

Total Daily I-70 Emissions in Martindale-Brightwood Corridor			
Air Pollutant	Grams/Mile	Grams	Pounds
VOCs	0.695	284,033	626
CO	8.637	3,529,778	7782
NOx	1.319	539,050	1188
PM2.5	0.0274	11,198	25
SO ₂	0.0102	4,169	9
NH ₃	0.0926	37,844	83

The Indianapolis Department of Metropolitan Development (DMD) is also the designated Metropolitan Planning Organization (MPO). The MPO is responsible for transportation planning and air quality conformity analysis for Marion County and the surrounding eight (8) counties. Additionally, the MPO works cooperatively with the Office of Sustainability in conducting other transportation-related air quality activities for the city. According to the DRAFT Air Quality Conformity Analysis (September 2009), the nine-county central Indiana air quality conformity region was designated by the U.S. EPA as an **attainment maintenance area** under the 8-hour standard for ground-level ozone. In April 2004, the U.S. EPA designated five (5) counties as a **basic nonattainment area** under the annual standard for fine particulate matter (PM2.5). The counties included in this designation are Hamilton, Hendricks, Johnson, Marion and Morgan. It is anticipated that future or budgeted levels of 8-hour ground-level ozone and PM2.5 emission levels will be in attainment based on more fuel-efficient vehicles and technology with fewer mobile emissions of VOCs, NOx, and PM2.5.

Conclusion

Ground-level ozone and particulate matter (PM2.5 and PM10) are considered the two air pollutants that pose the greatest threat to human health by the U.S EPA. Based on an evaluation of the available air information from the air quality monitoring stations in 2009, the ozone and PM levels in Martindale-Brightwood typically range in the good to moderate category.

While air quality in Martindale Brightwood is considered good for much of the year, on many days it is considered “moderate” and on some days of the year ozone and fine PM levels are listed as “unhealthy” for the sensitive populations living within the Martindale Brightwood area.

The specific air pollution sources of concern for Martindale Brightwood come from several different places. Air pollution comes from idling cars and trucks, heavy truck use on major roads, highways, industrial commercial facilities, unregistered auto body and repair facilities, diesel railroad engines and from other sources outside of Martindale Brightwood.

According to the Office of Sustainability, Marion County has a total of 257 air-permitted facilities based on available data from February 2009. The Martindale-Brightwood area contains 15 air-permitted facilities and accounts for approximately 6 percent of the total regulated facilities within the City of Indianapolis.

At this time, Marion County is in **attainment** for ground-level ozone; however, in **non-attainment** for PM_{2.5}. Based on a review of daily air-monitoring data from the Washington Park air quality monitoring station, ground-level ozone and PM_{2.5} levels typically ranged from good to moderate and daily/monthly readings are consistent with the surrounding air quality monitoring stations throughout Marion County. Additionally, mobile-source emissions from vehicles have an adverse effect on air quality. The Martindale-Brightwood area is bordered to the south by Interstate 70 which acts a contributor to HAPs in the region.

One consideration that should be noted is that there are air toxics or HAPs that originate from miscellaneous sources within and surrounding the Martindale-Brightwood area. Sources of HAPs include permitted commercial/industrial facilities and smaller non-permitted facilities such as gasoline stations, auto body/repair garages, dry cleaners; open burn piles, and off-road machinery. Currently, there are approximately 70 active industrial facilities that operate within or border the Martindale Brightwood. Additionally, there are approximately 5 active gasoline stations, 6 used car sales lots, 15 garages/body shops and 2 dry cleaner facilities operating within Martindale Brightwood. It should be noted that these figures are based on known or registered facilities and does not take into account home repair or garage facility operations.

What Can Be Done to Improve Air Quality in Martindale Brightwood?

There are many things that can be done to improve air quality within the Martindale Brightwood area. Here are some suggestions that can improve outdoor air quality and reduce air pollution around your area:

- Inform neighbors not to burn trash in their yard and ask them to stop that practice. Additionally, don't burn things in your yard. It is very harmful to burn garbage, plastics, cardboard, wrapping paper, particleboard, Styrofoam, and painted or treated wood.
- Try composting leaves, garden trimmings and kitchen waste.
- Let your neighbors know that it is unhealthy to keep their car or truck idling for long periods of time.
- Turn off non-essential lights and electronics when not in use and use energy-efficient appliances.
- Keep your humidifier, air conditioner and furnace well maintained.

- Consider riding a bike, walking, car-pooling or taking the public transit.
- Put gasoline in your car before sunrise or after sundown.
- Use paints with low volatile organic compounds and avoid oil-based paint.

If you see unusual smoke or emissions released by commercial or industrial businesses, contact either the Indianapolis Mayor's Action Center at 327-5437 or Marion County Health Department at 221-2266 to report the incident and file a complaint.

APPENDIX A

REFERENCE SOURCES

Daily information on air quality in your community with links to other city web sites is available through the following City of Indianapolis Knozone Program web site. This web site is located at the following address: <http://www.knozone.com/> (Knozone Program). Other helpful city web sites are listed below.

- 1) <http://www.sustainindy.org/air-quality.cfm> (SustainIndy: Air Quality)
- 2) <http://www.indy.gov/eGov/City/DPW/Environmental/AirQuality/AirMonitoring/Pages/home.aspx> (Department of Public Works-Air Quality)

Useful information can be found at the following Indiana Department of Environmental Management (IDEM) websites.

- 1) <http://www.in.gov/apps/idem/smog/> (Smog watch)
- 2) <http://www.in.gov/idem/4663.htm> (Toxwatch)
- 3) <http://www.in.gov/idem/4116.htm> (Air Monitoring Branch)
- 4) <http://12.186.81.89/Pages/Public/Search.aspx> (IDEM Virtual File Cabinet)
- 5) <http://www.in.gov/idem/4629.htm> (Air Emission Inventories)
- 6) http://www.in.gov/apps/idem/oe/idem_oe_order. (IDEM Enforcement Data Base)

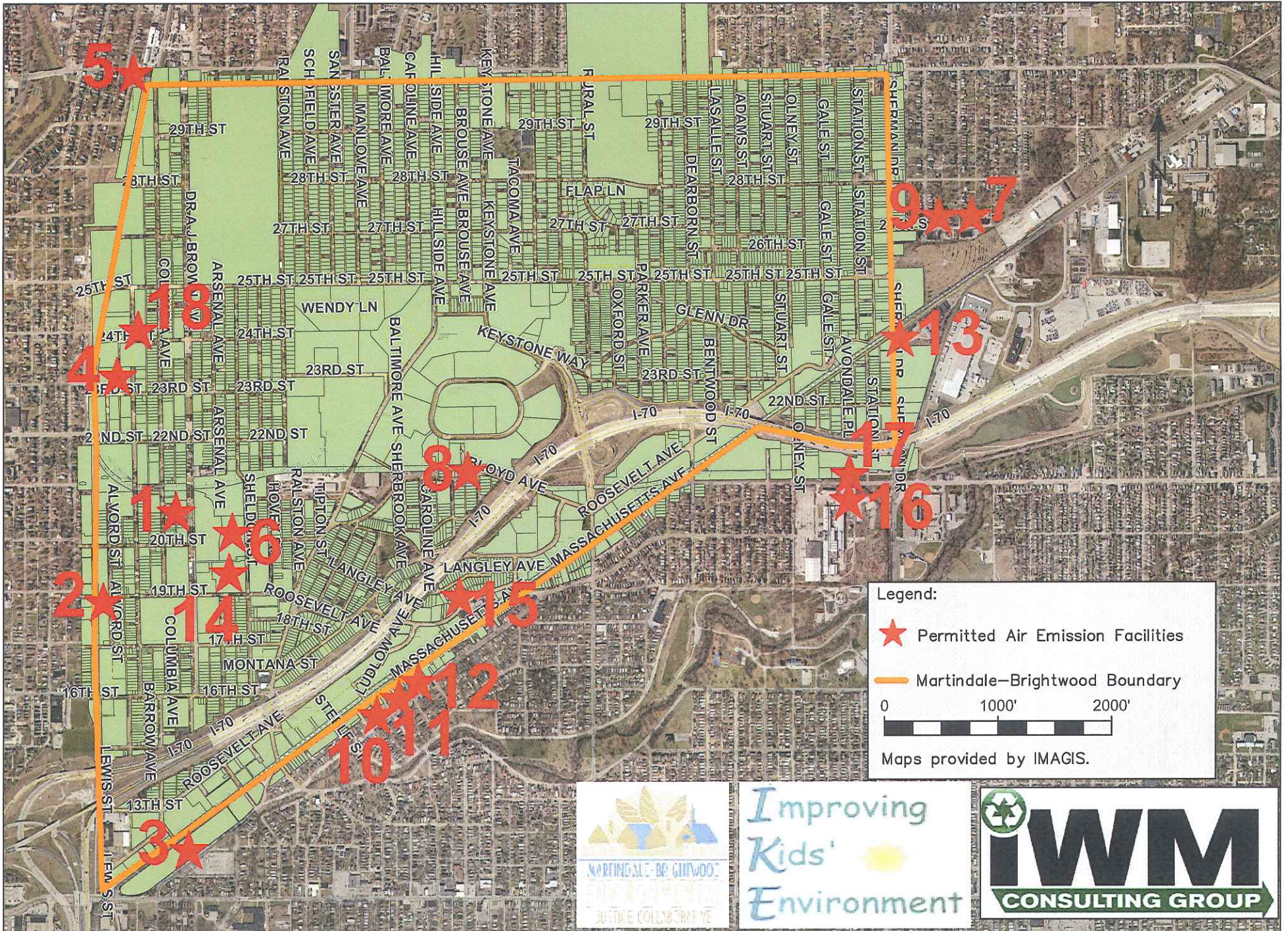
The U.S. EPA web sites also provide general information such as types of facilities within the Martindale Brightwood area and environmental health issues related to the type of business.

- 1) <http://www.epa.gov/enviro/index.html> (Envirofacts Data Warehouse)
- 2) <http://www.epa.gov/air/data> (U.S. EPA Air Data)
- 3) <http://airnow.gov>.
- 4) <http://www.epa.gov/TRI/tridata/index.htm> (Toxic Chemical Release Inventory)
- 5) <http://www.epa.gov/ncea/iris/index.html> (Integrated Risk Information System)
- 6) <http://www.epa.gov/compliance/index.html> (Enforcement and Compliance On-Line-ECHO).
- 7) <http://www.epa.gov/epahome/community.htm> (Protect the Environment In Your Community).
- 8) <http://www.epa.gov/air/toxicair/newtoxics.htm> (Toxic Air Pollutants)

APPENDIX B

AIR PERMITTED FACILITIES MAP

Air Quality Map/Permitted Air Emission Facilities



Legend:

- ★ Permitted Air Emission Facilities
- Martindale-Brightwood Boundary

0 1000' 2000'

Maps provided by IMAGIS.



Improving
Kids'
Environment

