

# 2009 Progress Report

Hamilton County Department  
of Environmental Services



**HAMILTON COUNTY**  
**ENVIRONMENTAL**  
**SERVICES**  
Air Quality • Solid Waste

**HAMILTON COUNTY**  
**ENVIRONMENTAL**  
**S E R V I C E S**  
**Air Quality • Solid Waste**

250 William Howard Taft Rd.  
Cincinnati, Ohio 45219

513-946-7777

[www.hcdoes.org](http://www.hcdoes.org)

The Hamilton County Department of Environmental Services (HCDOES) staff is pleased to provide you with the 2009 Progress Report. The purpose of this agency-wide report is to provide timely and relevant information on solid waste and air quality in one convenient publication.

Please let us know what you think about this report. Call (513) 946-7748 or email [sarah.dowers@hamilton-co.org](mailto:sarah.dowers@hamilton-co.org) with your comments or suggestions. HCDOES Air Quality Management Division's 2009 Data Report has been published as a separate supplement to this Progress Report.

Download copies from our website at [www.hcdoes.org](http://www.hcdoes.org). To request a printed copy of the 2009 HCDOES Progress Report or the 2009 Air Quality Data Report, call (513) 946-7777.



HCDOES at 250 William Howard Taft Road

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Cory R. Chadwick, Director

The sun is shining outside my window, the outside air temperature is approaching 70 degrees and another Annual Report from the Hamilton County Department of Environmental Services (HCDOES) is nearing publication. The year 2009 was marked not only by a change in the leadership in Washington, but also by many new programs, financed by taxpayers through stimulus dollars, coming out of Washington to help our economy strive for recovery. But more to the point of this annual report, many new air

regulations and changes to air pollution regulations were undertaken by the Obama Administration. Although it was widely thought the new ozone standard was going to be .075 ppm (parts per million), it wasn't a big surprise when the proposed standard was pulled back by the current Administration for further review. The new USEPA Administrator believes that the Clean Air Scientific Advisory Committee (CASAC) recommended level of between .060 and .070ppm was more appropriate to protect the public's health.

For those not aware, the Greater Cincinnati area was not expected to meet the previous administration's proposed .075 ppm standard for several years, so obviously a lower standard would take even more years to come into attainment.

The good news is that based on our monitored 8-hr O<sub>3</sub> (ozone) values for 2009, combined with '07 and '08 data, we are now in attainment for the 1997 8-hr O<sub>3</sub> standard of .08 ppm. Although the area is still in non-attainment for the annual PM (particulate matter) 2.5 standard of 15 micrograms per cubic meter, we expect to attain this standard by the end of 2010.

Numerous new national air quality standards are being proposed: O<sub>3</sub>, NO<sub>2</sub> (nitrogen dioxide), SO<sub>2</sub> (sulfur dioxide), Pb (Lead), and the PM<sub>2.5</sub> standard. The

potential for a CO<sub>2</sub> (carbon dioxide), a green house gas (GHG), standard is also under consideration. Many new air permit regulations are under development, while several established ones are also under review. The year 2010 is looking like a year for change when it comes to air quality regulations and national standards.

You can be confident that HCDOES personnel will be up-to-date on the latest information and share new developments through our web page, Air Quality Policy Advisory Committee (AQPAC) meetings and the department's education and outreach campaigns.

Our Solid Waste District has been very busy this past year and their hard work has resulted in many successes. Increases in recycling tonnages and successful community programs have resulted in improved environmental conditions in Hamilton County. Recycling reduced GHGs by over 30,000 tons. Enough energy was conserved to power over 6,500 homes for an entire year. These programs also resulted in saving over 300,000 trees. And finally, the Solid Waste District has been working hard on drafting a new 15-year solid waste management plan (required every 5-years) which must be submitted to Ohio EPA no later than January 13, 2013.

I would be remiss if I didn't again say thank you to the many professional members of my staff that, on a daily basis, strive to improve our environment.

Sincerely,

A handwritten signature in black ink that reads "Cory R. Chadwick". The signature is written in a cursive, slightly slanted style.

Cory R. Chadwick  
Director, HCDOES

# Hamilton County Department of Environmental Services (HCDOES)

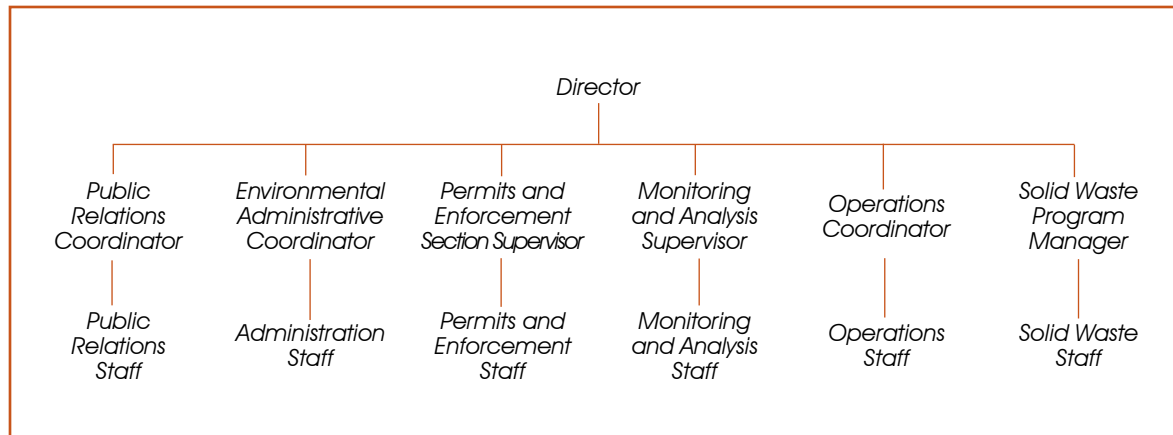
The Hamilton County Department of Environmental Services (HCDOES) houses both the Solid Waste Management District and the Air Quality Management Division.

The Solid Waste Management District (District) is dedicated to promoting recycling, waste reduction and responsible waste management in Hamilton County.

The Air Quality Management Division (AQMD) works with local, state and federal government agencies, businesses, communities and citizens to achieve and maintain healthy air quality. The AQMD serves Butler, Clermont, Hamilton and Warren counties in Southwest Ohio.



HCDOES Staff



HCDOES Organization Chart



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Check out our blog at <http://confessionsofacomposter.blogspot.com/>



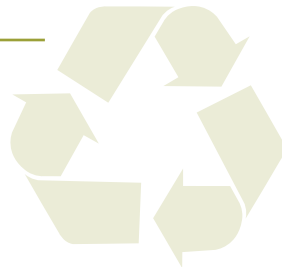
Watch us on you tube at <http://www.youtube.com/watch?v=2YYYgNsYQjg>

# Hamilton County Solid Waste Management District (District)

Established in 1991 by State law, the District is dedicated to ensuring that the county achieves state-mandated goals for recycling and waste reduction. The District strives to meet these goals by providing waste reduction programs to residents, communities, businesses and schools within Hamilton County.

## Vision

The Hamilton County Solid Waste Management District provides ethical environmental leadership to equitably promote the public good through innovative and responsible strategies leading to the management of all waste as a resource that leads to a society that generates zero waste.



### *Thank You for Recycling, Hamilton County Residents!*

In 2009, Hamilton County residents recycled 36,615 tons of material.

Those efforts resulted in significant environmental benefits:

- Reducing 30,722 tons of greenhouse gases—equivalent to taking 23,354 cars off the road each year
- Conserving enough energy to power 6,692 average homes for an entire year
- Saving 305,774 trees

## Solid Waste District Policy Committee

State law requires the formation of a local Solid Waste Management District Policy Committee to oversee the writing and implementation of the District's Solid Waste Plan. In Hamilton County, the Policy Committee has historically functioned as a Policy Board in the truest sense—determining recycling policy for the County.

Under State law, the Policy Committee is composed of seven members. However, Hamilton County added an ex-officio member from the waste industry in order to be more inclusive of the various stakeholders in the County. The 2009 District Policy Committee consisted of the following members:

- Board of County Commissioners Representative – Commissioner Todd Portune
- Representative of the Largest Municipality – Sue Magness, City of Cincinnati
- Representative of Townships – Bernard Fiedeldej, Colerain Township Trustee
- Representative of the Largest Health District – Tim Ingram, Health Commissioner, Hamilton County Public Health
- Generator Representative – Joe Maas, JTM Food Group
- General Interest Representative – Wright Gwyn
- Public Representative – Dave Meyer
- Ex-Officio Member – Larry Riddle, Rumpke

The District thanks the members of the 2009 Policy Committee for their time, effort and leadership.

## District Hotlines

The District is here to help! The District operates a variety of hotlines to provide the public with timely information about programs and solid waste-related issues.

Household Hazardous Waste Hotline	946-7700
Compost and Yardwaste Hotline	946-7755
Recycling Hotline	946-7766

### Community Program

The District works cooperatively with cities, townships and villages in Hamilton County to achieve state-mandated waste reduction goals. The District promotes and incentivizes recycling, provides drop-off programs for residents, awards grants for special projects, and offers technical assistance on solid waste management issues.

### Compost Bin Sale

To promote backyard composting, the District sponsored a compost bin sale in 2009. During this event, residents were able to purchase a compost bin and composting accessories at a reduced price and learn about composting from experts. In 2009, Hamilton County residents purchased over 1,600 backyard compost bins.

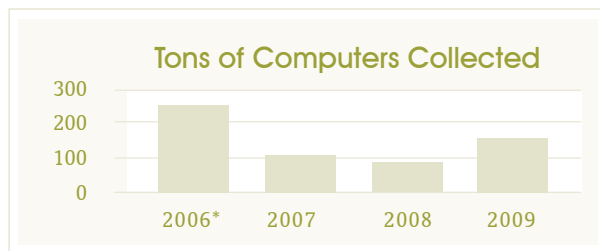


### Collection Programs

The District provides a variety of programs to Hamilton County residents for the proper disposal, or recycling of, special waste materials. These programs focus on materials not typically collected through curbside recycling.

#### Computer Recycling Collection Program

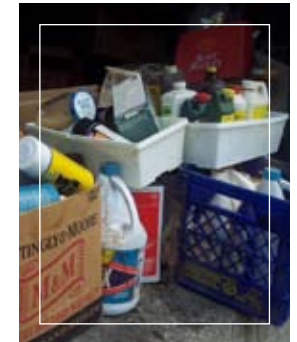
Electronic waste (or e-waste) is one of the fastest growing waste streams. To address this issue, the District offers a free computer recycling program. In 2009, the drop-off program was open eight months out of the year.



\*In 2006, the District allowed businesses to participate in the computer recycling program. Starting in 2007, the District only allowed residents to participate.

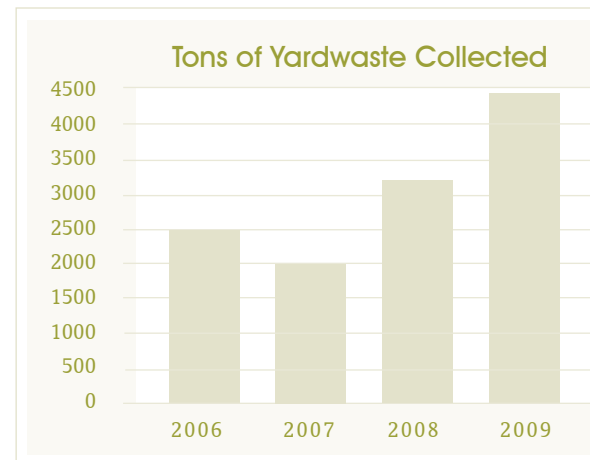
### Household Hazardous Waste (HHW) Drop-Off Program

One of the most popular District programs is the Household Hazardous Waste Drop-Off. This program allows residents to drop-off products such as oil, pesticides, solvents, and cleaners for recycling or disposal at no charge to the resident.



### Yardwaste Drop-Off Sites

The District contractually operates three, free yardwaste drop-off sites for residents. More than 30,000 cars use the drop-off sites annually.



### Tire Collection

The District provides funding to Keep Cincinnati Beautiful to organize tire collection events. In 2009, approximately 72 tons of tires were recycled.

## Grants

To encourage recycling and waste reduction, the District manages two community grant programs. Grant funding accounts for over 40 percent of the District's annual budget.

### Residential Recycling Incentive (RRI)

RRI funds offer Hamilton County communities a financial incentive to increase recycling. As a community increases the tons of materials collected and increases their overall recycling rate, the community receives more RRI funds.

In 2009, the District divided \$1,050,000 in RRI funds among Hamilton County communities. Funds were spent on recycling collection costs, recycling promotion, and purchasing recycled-content materials.



The Corporation for Findlay Market, on-site food waste composting



### District Priority Grant

The District Priority Grant funds innovative recycling and waste reduction projects in Hamilton County. In 2009, the three District priorities included: recycling promotion, recycling in public areas, and food waste diversion. The District budgets up to \$50,000 for non-profit organization grants and \$50,000 for municipality grants. In 2009, the District awarded the following District Priority Grants:

#### Non-Profit Grants

- The Corporation for Findlay Market, \$25,001, initiated on-site food waste composting and public recycling throughout the market.
- Keep Cincinnati Beautiful, \$6,608, purchased permanent recycling containers for Cincinnati City Hall and additional outdoor recycling containers.
- Economics Center for Education and Research, \$3,800, implemented the student enterprise program which focused on recycling of materials in elementary schools.

#### Community Grants

- City of Blue Ash, \$16,560, purchased recycling containers for downtown, parks, and recreation areas.
- City of Forest Park, \$762, purchased recycling containers for special events.
- City of Harrison, \$3,220, added two new public recycling drop-offs.
- City of Loveland, \$16,777, purchased recycling containers for parks.
- City of Sharonville, \$11,360, purchased recycling containers for city facilities and parks.



City of Loveland, Nisbet Park, recycling containers

## Community Outreach

Every year the District works with two communities to increase their recycling rates. In 2009, the District partnered with Whitewater Township and Miami Township. Through a targeted outreach campaign, Miami Township increased their recycling tonnages by 44%; Whitewater Township increased by 11%.

## Multi-Family Recycling Program

Many apartment and condominium complexes are excluded from most community curbside recycling programs. The District helps these complexes begin recycling by developing a customized recycling plan, creating educational materials, and paying for the first year of the recycling contract when the property manager or condo association agrees to pay for the next two years. In 2009, the District helped seven complexes initiate recycling programs:

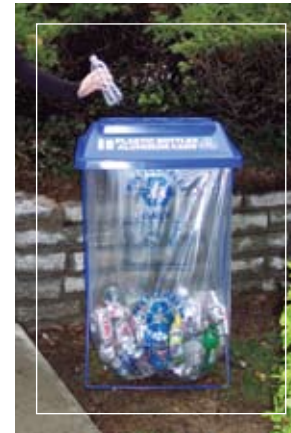
- Harper's Point
- Tri Deca Lofts
- The Gramercy
- Clinton Springs
- Centennial Station
- Captain's Watch
- Faber Jesuit Community



Recycling drop-off container

## Public Recycling Container Loan Program

The District loans recycling containers to encourage recycling at public events. In 2009, recycling was available at 107 events, including the Flying Pig Marathon, St. Rita's Festival, Hyde Park Farmer's Market, Green Township Concerts in the Park, and several church festivals.



Clear Tainer recycling container



Pop Bottle recycling container

## Business Programs

The District offers a variety of programs to Hamilton County businesses to assist them with waste reduction. To encourage businesses to recycle, the District provides waste assessments, technical assistance, and a materials exchange program.

### *The Interchange*



This online materials exchange service allows businesses to advertise waste materials they have or materials they need. By exchanging these materials businesses save on purchasing and disposal costs. The quarterly newsletter, The Interchange, is distributed electronically to 3,000 subscribers, informing businesses of new waste regulations and profiles local waste reduction ideas.

In 2009, 33.65 tons of material was exchanged. Since its inception in 1996, over 92,000 tons of material has been diverted through The Interchange program.

### Go Green Challenge

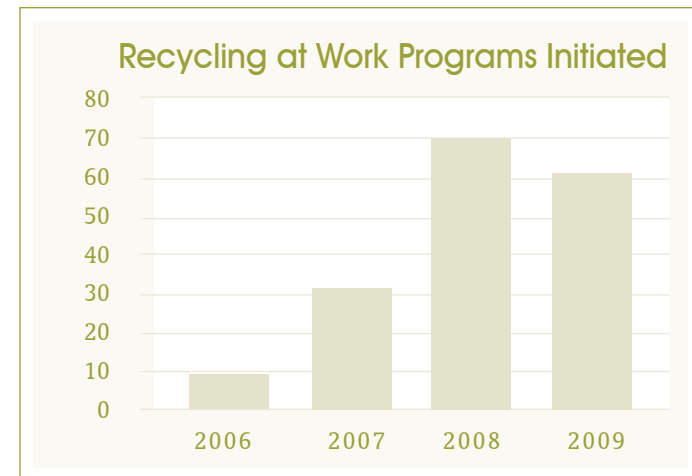


The mission of the Go Green Challenge is to encourage organizations, both large and small, to reduce their environmental impact. Since its inception in 2007, 150 businesses, institutions, and municipalities have joined the Go Green Challenge by setting environmental goals for their own organizations.

## Recycling at Work



Because nearly half of the waste going to the landfill is paper, the District developed Recycling at Work, a program helping businesses and office complexes start recycling. The District customizes a recycling plan, finds an appropriate recycler, helps coordinate collection, creates educational materials for employees, and provides indoor collection containers. In 2009, 62 office buildings initiated a recycling program.



## Education Program

The District continues to provide Hamilton County schools and teachers with resources and tools to reach students and their families with up-to-date information and lessons about solid waste management, recycling, and composting. The District presents or subsidizes a variety of solid waste-related educational opportunities for students through classroom presentations, field trips, and school-wide assemblies. Further, the District conducts teacher workshops on how to incorporate solid waste and recycling issues in their curricula.

The District's Education Program accomplishments for 2009 include:

- Presented 182 recycling-related classroom programs, assemblies, and field trips reaching 10,270 students.
- Presented workshops focused on recycling, composting, vermicomposting, and solid waste reduction to 170 teachers.
- Participated in 19 special events, reaching 15,662 adults and children.



School assembly lead by SWMD Education Assistant



Community Outreach Coordinator shows fresh compost



Go Green Night sponsored by the Cincinnati Cyclones

## Special Projects

In 2009, the District worked on several new projects to increase recycling and respond to our stakeholders' needs.

### RecycleBank Pilot

The District continued its partnership with Rumpke Recycling, the Ohio Department of Natural Resources, and the City of Montgomery to conduct an innovative program that rewards Montgomery residents with coupons and gift certificates for recycling. All Montgomery residents participating received a 64-gallon wheeled recycling cart with a RFID tag, an electronic chip. When Rumpke collects the recycling, the cart is weighed and the exact amount of material each household recycled is recorded. Residents then receive "RecycleBank Points" they can redeem on a website or over the phone for their choice of discount coupons or gift certificates. Since the program began in October 2008, there has been a 50 percent increase in the tons of material collected for recycling.

### Litter Collection Program

In July, 2008, the District partnered with the City of Cincinnati, 3CDC, Hamilton County Sheriff, and Keep Cincinnati Beautiful in a pilot project to reduce litter through enforcement, prevention, and clean up. The District, 3CDC, and the City of Cincinnati each contributed funds for Sheriff services. The Sheriff provided daily litter collection through the use of community service in Over-the-Rhine, twice-a-month litter collection in nine Cincinnati neighborhoods and eight political jurisdictions outside the City of Cincinnati, and issued citations and warning letters. During 2009, 198 tons of litter was collected through this program.

## Ohio Department of Natural Resources Grants

Each year the Ohio Department of Natural Resources, Division of Recycling & Litter Prevention solicits grant applications for its Community Development Grant and Market Development Grant. Typically, the District applies for grants on behalf of businesses and communities. In 2009, the District received grant funding for the following projects:

- Rumpke Recycling received a \$250,000 grant to assist with the expansion of their material recovery facility.
- Cincinnati Public Schools received an \$80,000 grant to implement an urban wood waste program in conjunction with the Cincinnati Park Board.



Rumpke Recycling, Material Recovery Facility (MRF) plastic sorting

## Annual Recycling Awards

The District recognized recycling leaders in our community at the 5<sup>th</sup> annual recycling awards ceremony on America Recycles Day, November 17<sup>th</sup>. The following recycling leaders were recognized for their efforts:

Outstanding Recycling Educator – *Cris Cornelssen, Winton Woods Elementary School*

Outstanding School Recycling Program – *Monfort Heights Elementary School*

Student Recycler of the Year Award – *Sam Dubin, Walnut Hills High School*

Outstanding Recycling in a Multi-Family Residence – *One Lytle Place Apartments*

Go Green Challenge Award – *Neyer Properties*

Recycling at Work Program of the Year Award – *Cincinnati Bell*

Public Recycling Excellence Awards – *Duke Energy Convention Center*

The Interchange Award – *Frame USA*

Friend of Recycling – *Luanne Diffin*

Best Community Recycling Program (less than 10,000) – *City of Madeira*

Best Community Recycling Program (greater than 10,000) – *City of Blue Ash*

Most Improved Community Recycling Program – *City of Mt. Healthy*

John Van Volkenburgh Award for Recycling Innovation – *City of Wyoming*



Cris Cornelssen,  
Winton Woods Elementary



Laura Taphorn,  
Monfort Heights Elementary



Sam Dubin,  
Walnut Hills High



Dan Neyer,  
Neyer Properties



Karol Osinski and  
Jouett Brenzel,  
Cincinnati Bell



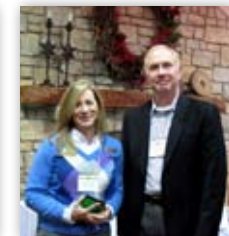
General Manager Ric Booth,  
Duke Energy Convention  
Center



Sam Barla,  
Frame USA



Luanne Diffin



Mayor Sarah Evans and  
Councilman Rick Brasington,  
City of Madeira



Mayor Jack Buckman,  
City of Blue Ash



Ray Rissel,  
City of Mt Healthy



Vice Mayor Jim O'Reilly and  
Jen Eismeier Osier,  
City of Wyoming

The AQMD works as a local field office under the authority of the Ohio Environmental Protection Agency (OEPA) and the United States Environmental Protection Agency (USEPA). The AQMD monitors the compliance status of the businesses and industries with air pollution sources in the four-county region. Additionally, the AQMD prepares permits, conducts facility inspections and reviews, initiates enforcement actions and responds to air quality complaints.

The AQMD also maintains continuous and intermittent monitors measuring pollutants on a daily basis throughout Southwest Ohio. The AQMD performs pollen and mold counts, works with local meteorologists to determine when to issue Smog Alerts, measures air toxic levels, performs anti-tampering inspections, coordinates emissions inventory programs and observes and validates all stack (source) testing that occurs in the four-county area.



Cincinnati's Skyline, Hamilton County, Ohio

## AQMD Hotlines/Website

The AQMD operates a variety of hotlines to provide the public with timely information about air quality issues.

Air Quality Index &  
Mold and Pollen Count Hotline

513-946-7753

Living With Allergies &  
Air Quality Brochures Hotline

513-946-7747

Air Quality 24-hour  
Complaint Hotline

513-946-7777 or  
800-889-0474

Please visit HCDOES' website at [www.hcdoes.org](http://www.hcdoes.org) to learn more about solid waste and air quality in Southwest Ohio. You can download this and other publications, check daily AQI forecasts, learn where to recycle and much more when you visit our website!

## Permitting Activity

The AQMD's Environmental Compliance Specialists (ECSs) prepare permits outlining the applicable air pollution regulations for various types of industries. Businesses may be required to apply for and obtain a Permit to Install (PTI) or a Permit to Install and Operate (PTIO) prior to installing a new emissions unit. Businesses may be required to apply for or renew an expired PTO in order to continue operating an existing emissions unit. The ECSs forward permit recommendations to the Ohio EPA who issues all permits.

	2007	2008	2009
Initial PTI/PTIOs*	100	74	78
Initial PTI/PTIOs Sent to Ohio EPA	87	64	66
Renewal PTO/PTIOs Sent to Ohio EPA	356	594	351

\*Beginning in 2008, Ohio EPA no longer issued PTOs for non Title V facilities. All non Title V facilities are now issued a PTIO for any new emissions unit or renewal of an existing PTO.

The AQMD also monitors the compliance status of facilities covered by federal air pollution programs such as the National Emissions Standards for Hazardous Air Pollutants and the New Source Performance Standards. Title V permits are required for businesses that have criteria pollutant emissions or hazardous air pollutant emissions greater than a predetermined major source threshold. Major source facilities with multiple emissions units are covered under a Title V operating permit.

## Inspections

The AQMD staff conducts facility inspections and reviews operational and emission reports to ensure businesses comply with federal and state regulations. Major facilities (those with over 100 tons per year of emissions) are inspected every other year and larger minor facilities (those with less than 100 tons per

year of emissions) are inspected every five years. Inspections and reviews of reports are the primary methods of identifying violations of these regulations. If a facility inspector detects violations of regulations, an enforcement action against the facility begins.

## Asbestos Activity

The AQMD is responsible for enforcing state and federal asbestos regulations. All personnel certified as Asbestos Hazard Evaluation Specialists oversee asbestos removal from commercial and industrial facilities. These Asbestos Specialists, certified by the state of Ohio in asbestos regulations and removal methodology, are permitted to enter regulated areas in order to conduct inspections or investigate complaints. If necessary, the Asbestos Specialists can collect samples of material which may contain asbestos. Collected samples can be analyzed in the AQMD laboratory by personnel trained in the microscopic analysis of asbestos.

Federal law requires that before demolition of a commercially applicable building can begin, the building must be inspected by an Asbestos Hazard Evaluation Specialist to determine if asbestos is present. If asbestos is found, federal law requires a licensed asbestos removal contractor to properly remove and dispose of the asbestos containing material (ACM) depending on the amount of ACM, the type of ACM and the condition of the material.

2009 Asbestos Activity	
Total Number of Notifications	319
Total Number of Inspections	120
Yearly Inspection Percentage	38%

\*The Ohio EPA requires 15% of notifications be inspected. The Asbestos Hazard Evaluation Specialists at HCDOES routinely exceed a 30% inspection rate.

## Stack/Source Testing

Source tests are conducted to determine the amount and types of air pollutants emitted from the facilities in the AQMD's jurisdiction. Samples are taken from stacks and analyzed. During a source test, AQMD staff observe and document the third party test team's sampling efforts as well as the operating parameters of the process being tested and the equipment controlling air pollution from the source. After the test, AQMD staff review and validate the test report when it is received. Emissions determined by source testing must be below the allowable levels in a facility's air permit. Or, in the case of a new operation, the emissions determined by source testing will determine the allowable levels in the facility's air permit.

Source testing determines:

- The compliance of the source while it operates at its maximum capacity
- The operating parameters for the process and associated control equipment
- The emission factors to be used in calculating the facility's annual emissions

Some facilities are required to operate Continuous Emission Monitors (CEMs) to assure ongoing compliance with permit limits. These CEMs measure opacity, sulfur dioxide, nitrogen oxides, carbon dioxide or volatile organic compounds. The CEM units are required to undergo annual tests known as Relative Accuracy Test Audits (RATAs) which compare the CEM readings to other certified monitors. The AQMD staff witness and validate these RATAs.

Additionally, quarterly reports of CEM data are sent to the AQMD staff that review and determine the ongoing compliance of a source. If a source is shown to have emissions greater than allowable for more than 5% of its operating time, the AQMD staff initiate enforcement action. Similarly, if a source's CEMs are found to be inoperable for more than 5% of the source's operating time in a given quarter, enforcement action will also be initiated.

### Total Sources Tested in 2009

Test Type	Butler County	Clermont County	Hamilton County	Warren County	Totals
Boiler/Incinerator	21	11	18	0	50
Chemical/Other	2	2	14	4	22
Asphalt/Roofing	2	0	1	0	3
Printing/Coating	0	0	1	1	2
<b>Totals</b>	<b>25</b>	<b>13</b>	<b>34</b>	<b>5</b>	<b>77</b>

## Enforcement

AQMD personnel issue a Notice of Violation (NOV) to facilities in violation of permit requirements. The NOV identifies the air quality rule violated and requires the company to submit a plan to resolve the problem. When the violations identified warrant additional enforcement actions, the AQMD can pursue enforcement locally or send it to Ohio EPA for resolution. Violations can result in fines and/or additional emissions control requirement.

	2007	2008	2009
Warning Letter	47	57	54
NOVs	48	48	17
Enforcement Cases	14	11	11
Civil Penalties*	\$753,100	\$512,366	\$535,130

\*Supplemental Environmental Project money included.

## Permit Program Updates

Ohio EPA implemented new permitting software in 2008 referred to as STARS2. This was a completely new program which replaced the existing STARS software. The STARS2 software has more functionality than STARS and has helped expedite the processing of permit recommendations to the Ohio EPA. Air Quality personnel continued to attend STARS2 training classes in 2009 to learn how to use the new program.

USEPA continued to issue Maximum Achievable Control Technology Standards regulating hazardous air pollutant emissions for non-major or area sources. These rules may impact many smaller businesses which were previously exempted from requirements since they were not major facilities. For more information on these area source standards, visit [www.epa.gov/ttn/atw/area/arearules.html](http://www.epa.gov/ttn/atw/area/arearules.html).

## Title X

The City of Cincinnati enforces a stringent nuisance regulation under Title X of the Municipal Code. The AQMD continued to work with the City of Cincinnati's Office of Environmental Quality and the City's Solicitor's Office to identify and resolve Title X violations. The Title X Program settled one local enforcement case in 2009.

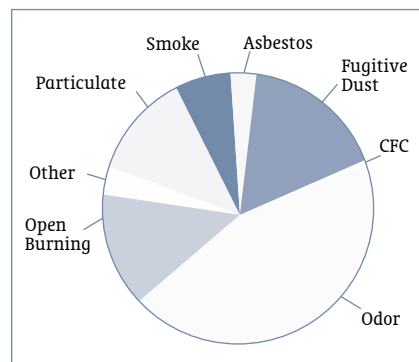
## Complaint Program

The Air Quality Complaint Program allows residents to call 24-hours a day, seven days a week (excluding major holidays), to report outdoor air quality concerns. In 2009, the AQMD added the ability for an online complaint form. To view to new online complaint form, visit [www.hcdoes.org](http://www.hcdoes.org).

The AQMD uses monitoring equipment when possible on complaint investigations. For example, the AQMD uses a hand-held photo-ionization detector that records total organic compounds. Additionally, the AQMD added a 4-gas monitor for hydrogen sulfide (H<sub>2</sub>S), carbon monoxide (CO), oxygen (O<sub>2</sub>) and lower explosive limit (LEL).

In 2009, the AQMD staff had a goal to respond to 90 percent of air quality complaints within 30 minutes of submission. AQMD exceeded this goal and achieved a rate of 96 percent. The AQMD continues to strive for timely and efficient responses to citizens' air quality complaints.

### 2009 Complaints by Type



### Total Complaints

2007: 567  
2008: 512  
2009: 422

## Citizen's Canister Sampling Program

The Citizen Canister Sampling Program is another tool the AQMD uses to investigate complaints. Citizens can request a canister from the AQMD to take an instantaneous air sample when they perceive unusual outdoor odors or other air emissions. After taking a sample, the participant contacts the AQMD. The AQMD staff member meets with the participant, conducts an investigation, retrieves the sample and delivers the sample to an independent laboratory for analysis. The AQMD can use the results of the canister analysis as a tool to identify the source of the complaint. In 2009, twelve canister samples were taken by Southwest Ohio residents.



Photo-ionization Detector



Air Sampling Canister

## Monitoring Activities

The AQMD maintains a monitoring network that uses state-of-the-art instruments dedicated to collecting high-quality air quality data. This data determines the compliance status of Southwest Ohio with the National Ambient Air Quality Standards (NAAQS) established by the USEPA. Southwest Ohio is in compliance with all of the NAAQS, with the exception of the annual average for PM<sub>2.5</sub> (particulate matter 2.5 microns and smaller) and the 8-hour ozone standard. A summary of the compliance status with the eight standards is located on the right.

## Compliance Status Summary

In Compliance	
yes	Nitrogen Dioxide, NO <sub>2</sub>
yes	Sulfur Dioxide, SO <sub>2</sub>
yes	Carbon Monoxide, CO
yes	Lead
yes	Particulate Matter, PM <sub>10</sub>
yes	Particulate Matter, PM <sub>2.5</sub>
no	24-hour average 35µg/m <sup>3</sup> annual average 13µg/m <sup>3</sup>
yes	Ozone, O <sub>3</sub>
no	8-hour 0.08 parts per million 8-hour 0.075 parts per million

\*Monitoring Data shows attainment.

## Monitoring

To determine the air quality in Southwest Ohio, the AQMD maintains monitors in four counties—Butler, Clermont, Hamilton and Warren. There are two types of monitors:

**Continuous monitors:** operate constantly and measure ozone, sulfur dioxide, carbon monoxide, oxides of nitrogen and inhalable particulates. Seventeen continuous monitors are located in Southwest Ohio.

**Intermittent monitors:** collect airborne particles at 24-hour intervals from twelve locations in the area. Toxic monitoring data is also collected from intermittent monitors.

## Annual Monitoring Network Plan

The AQMD and all air monitoring organizations are required by USEPA to submit an annual monitoring plan to the regional office by July 1<sup>st</sup> of the current year. Information in the plan includes Air Quality System Code, street address, geographical coordinates, parameters monitored, type of monitor used, purpose of monitoring—population or source oriented—and any proposed monitoring changes. The plan is available for public comment for a minimum of 30 days before the due date to the Regional Administrator.

A link to the AQMD's most current annual monitoring network plan is available at [www.hcdoes.org](http://www.hcdoes.org). This links to the Ohio EPA, Division of Air Pollution Control and the annual monitoring network plan for Ohio.

## Analysis and Laboratory Support

The AQMD maintains the air quality monitoring network, provides analytical laboratory support services (such as filter weighing, microscopic analysis and pollen and mold counting), monitors all facility stack tests, tracks industrial emissions data and conducts quality assurance checks and audits for all data generated by the section.



Continuous Monitor



Intermittent Monitor

## Monitoring Site Map



Colerain Continuous Air Monitor Site

## Monitoring Site Map Key

Code	Location	County	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>x</sub>	CO	PM <sub>10</sub>	TSP	PM <sub>2.5</sub>	
Continuous Air Monitor Sites										NCORE
A	Hamilton	Butler		×						
B	Middletown	Butler	×	×					×	
C	Batavia	Clermont		×					×	
E	Colerain	Hamilton	×	×						×
G	Taft (HCDOES)	Hamilton		×	×		×		×	
I	Post Office (Downtown)	Hamilton				×				
K	Sycamore	Hamilton		×					×	
L	Lebanon	Warren		×					×	
Intermittent High-Volume Network Sites										TOXICS
1	Library (Hamilton County Public)	Hamilton						×		
5	Lockland	Hamilton					×			
6	Carthage	Hamilton					×		×	×
12	St. Bernard	Hamilton							×	
18	Verity School (Middletown)	Butler					×		×	
33	Norwood (Health Department)	Hamilton							×	
63	Ohio Bell (Middletown)	Butler					×	×		
64	Taft (HCDOES)	Hamilton					×		×	
66	Lower Price Hill	Hamilton							×	×
68	Sacred Heart School (Hamilton)	Butler							×	
69	Winton (Waldorf School)	Hamilton								×
70	Addyston	Hamilton								×

### National Ambient Air Quality Standards (NAAQS)

The USEPA is required to review the National Ambient Air Quality Standards (NAAQS) every 5 years to determine if the current levels of the standard are protective of public health. The review process involves extensive scientific review of health studies. If evidence exists to show the standard needs to be lowered to a level that is more protective, the USEPA proposes a new level. After a public comment process, the USEPA reviews the comments and sets the standard as appropriate. In 2009, four of the six criteria pollutants were involved in some portion of the formal process. As a result, ambient monitoring networks, both locally and nationally, will be changing in the next several years. The AQMD staff is preparing to implement those changes to our ambient monitoring network.

### Ozone—8-hour standard, 75 ppb\*

	2007-2009	2006-2008	2005-2007	2004-2006	2003-2005
Butler County	82	82	85	80	85
Clermont County	75	78	82	78	83
Hamilton County	82	85	86	82	86
Warren County	82	85	88	86	89

\*3 year average of the 4<sup>th</sup> high 8 hour average

### PM 2.5—24-hour standard, 35 ug/m3\*

	2007-2009	2006-2008	2005-2007	2004-2006	2003-2005
Butler County	37.0	34.0	38.0	38.3	41.1
Clermont County	34.0	33.0	34.0	NA	NA
Hamilton County	38.0	37.0	41.0	40.4	40.3
Warren County	34.0	NA	NA	NA	NA

\*3 year average 98<sup>th</sup> percentile  
NA—Monitoring not operational to calculate this value

### PM2.5—Annual average, 15 ug/3\*

	2007-2009	2006-2008	2005-2007	2004-2006	2003-2005
Butler County	14.0	14.4	16.1	15.7	16.1
Clermont County	12.2	12.8	14.1	NA	NA
Hamilton County	15.0	15.7	17.3	17.4	17.9
Warren County	12.5	NA	NA	NA	NA

\*3 year average  
NA—Monitoring not operational to calculate this value

### Lead (Pb)

A new standard for lead was published in the Federal Register November 12, 2008. The new standard is 0.15 micrograms per cubic meter ( $\mu\text{g}/\text{m}_3$ ) which is significantly lower than the previous standard of 1.5  $\mu\text{g}/\text{m}_3$ . The averaging time period for the standard changed as well from a quarterly basis to a three month rolling average. The new standard became effective January 12, 2009.

The revised rule requires monitoring near sources that emit 1 ton or more of lead into the air on an annual basis. Monitoring near these sources will begin on January 1, 2010. After a thorough review of both the emissions inventory database and modeling of the potential sources, the AQMD does not have any sources that require monitoring under this new rule.

The rule also requires monitoring in Combined Metropolitan Statistical Areas (CBSAs) having a population of 500,000 or more. Population based monitoring is required to begin on January 1, 2011.

On December 23, 2009, the USEPA proposed to revise the November 12, 2008 rule. Proposed changes to the rule include the following:

- Monitoring is proposed near sources with the potential to emit 0.5 tons per year of lead
- Monitoring is proposed at NCore sites and not specific to CBSAs 500,000 and greater in population
- It is proposed airports be considered as a source due to the lead in aviation fuel used for piston-engine aircraft

At this time, the AQMD does not anticipate having any source-oriented monitors based on the proposed changes to the rule. If the proposed rule is promulgated, the AQMD will have a lead monitor at our NCore site. For more information on NCore, please refer to page 31.

### Nitrogen Dioxide ( $\text{NO}_2$ )

In January of 2010, USEPA will set a new air quality standard for nitrogen dioxide ( $\text{NO}_2$ ) at 100 parts per billion (ppb) for a one hour average. To determine if an area is in attainment of the standard, the 3-year average of the annual 98th percentile of the maximum daily 1-hour concentrations must be equal to or less than 100 ppb. The current annual standard of 53 parts per billion is retained.

The standard requires monitoring in Combined Metropolitan Statistical Areas (CBSAs) of 1 million people or more. Monitoring near roadways is a new component of this standard. Near roadway is defined as within 50 meters of the outer edge of a lane of traffic. Near roadway monitoring is required in areas of population of 500,000 nearest the section of road with the highest daily average traffic count. Additional near roadway monitors are required in CBSAs of 2.5 million people or more or near a road segment having an average daily traffic count of 250,000.

There will be 40 additional monitors required nationwide to be located in populations susceptible and vulnerable to  $\text{NO}_2$  related health effects. The states and Regional Administrators will work to locate these monitors in the most appropriate places.

Under these new requirements, HCDDES will operate two (2)  $\text{NO}_2$  monitors: a community oriented monitor and one (1) near roadway monitor. All new monitors are required to be operational no later than January 1, 2013.

### Sulfur Dioxide (SO<sub>2</sub>)

On November 16, 2009, USEPA proposed a new standard for the criteria pollutant, sulfur dioxide (SO<sub>2</sub>). USEPA is proposing a standard between 50 and 100 ppb averaged for 1 hour. An area will be considered to be in attainment of the standard if the 3-year average of the 4th highest daily maximum one hour concentration in a year is equal or below the final standard.

Ambient monitoring locations will be determined in two separate ways. The first approach proposed by USEPA is a population weighted exposure index locating monitors in CBASs based on population 2nd maximum SO<sub>2</sub> emissions. The second approach is to locate monitors in a state based on the states' contribution to the SO<sub>2</sub> emissions nationwide.

The Greater Cincinnati area is required to have two monitors based on the first approach. No information is currently available on the number of monitors in our area based on the second set of criteria. The rule is scheduled to become final on June 2, 2010.

### Ozone (O<sub>3</sub>)

January 6, 2010 USEPA proposed to lower the 8-hour ozone air quality standard from the 75 ppb set on March 12, 2008 to a lower standard between 60 and 70 ppb averaged over an 8-hour period. USEPA initiated the review to be more protective of public health. The proposed level of the standard closely follows those levels recommended by EPA's panel of science advisors, the Clean Air Science Advisory Committee (CASAC).

An area will attain the standard when the three year average of the 4<sup>th</sup> highest 8-hour average is at or below the level of the standard.

At the same time, as USEPA proposed lowering the standard from 75 ppb to between 60 and 70 ppb, USEPA proposed a secondary standard. This standard is more protective of biological exposure to seasonal ozone concentrations. The standard proposed is a cumulative weighted average based on the three highest months of ozone concentrations.

Based on current monitored concentrations, the AQMD does not expect to be in attainment for this new proposed standard. As part of a July 2009, ozone monitoring rule proposal, the ozone monitor located at our NCore site will be operational year round, versus the current requirement of April through October.

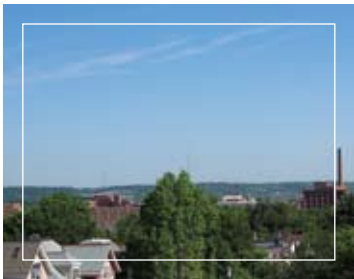
## Air Quality Index

The Air Quality Index (AQI) was created by the USEPA to inform the public about their local air quality conditions and what these conditions mean to their health. The AQI reports on the main air pollutants regulated by the Clean Air Act, including: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen dioxide. Seven days a week, the AQMD's instruments measure the level of each of the pollutants at sites located throughout the four-county region.

The daily AQI is based on the single pollutant with the highest air quality index (determined by using the NAAQS). The AQI for the Greater Cincinnati area is generally based on ozone or particulate matter. The AQI is then reported in the newspapers, on local television and radio weather reports, on the AQI Hotline and at [www.hcdoes.org](http://www.hcdoes.org).

## Midwest Hazecam

To provide the public with information about visibility throughout the upper Midwest, the AQMD participates in a visibility camera network. The web cam for this program is located on the rooftop of the Taft location. To learn more, visit [www.mwhazecam.net](http://www.mwhazecam.net).



Midwest Hazecam—view on a clear day



Midwest Hazecam—view on a hazy day

## Air Quality Index for Particulate Matter and Ozone

Air Quality	Index	Health Guide for Particulate Matter	Health Guide for Ozone
Good	0 - 50	None	None
Moderate	51 - 100	Unusually sensitive people should consider limiting prolonged outdoor exertion.	Unusually sensitive people should consider limiting prolonged outdoor exertion.
Unhealthy for Sensitive Groups	101 - 150	People with heart or lung disease, older adults and children should reduce prolonged or heavy exertion.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged or heavy exertion.
Unhealthy	151 - 200	People with heart or lung disease, older adults and children should avoid prolonged or heavy exertion. Everyone else should reduce prolonged or heavy exertion.	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion. Everyone else, especially children, should limit prolonged outdoor exertion.
Very Unhealthy	201 - 300	People with heart or lung disease, older adults and children should avoid all physical activity outdoors. Everyone else should avoid prolonged or heavy exertion.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion. Everyone else, especially children, should limit prolonged outdoor exertion.

## Smog Alerts

The AQMD staff retrieves and reviews ozone and particulate matter (PM) levels as well as weather forecast information on a daily basis. If unhealthy levels of ozone or PM are expected, a conference call is scheduled by the AQMD, in cooperation with local meteorologists, to determine if conditions are favorable to issue a Smog Alert. The AQMD staff will issue a Smog Alert between 2:00 p.m. and 2:30 p.m. the day before a high ozone and/or PM day is anticipated.



Ground-level ozone is formed through a complex chemical reaction between volatile organic compounds (VOCs) and nitrogen dioxide (NO<sub>2</sub>) in the presence of sunlight. Sources of VOCs and NO<sub>2</sub> include emissions from facilities, gas- and diesel-fueled vehicles, gasoline storage, off-road engines and consumer paints and cleaners.

PM (dust, soot, ash and other solids and aerosols) can come from a variety of sources, including wood burning, diesel engines, gasoline engines, factories and power plants. Individually, these particles and droplets are invisible to the naked eye, but collectively, they can appear as clouds or a fog-like haze.

During a Smog Alert, businesses and individuals are asked to avoid activities that contribute to greater levels of smog formation, such as driving, using oil-based paints and stains, refueling vehicles or lawn mowing. In 2009, two Smog Alerts were issued which lasted a total of three days.

Although Smog Alerts are typically issued during the summer months, HCD OES monitors PM levels in the fall and winter in case high levels of PM dictate a Smog Alert be issued.

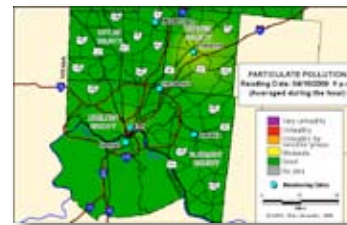
The following is a breakdown of the smog activities for Butler, Clermont, Hamilton and Warren counties:

## Smog Activities

Year	Number of Smog Alerts Issued	Number of Days Smog Alert in Effect	Number of 8-Hour Ozone Exceedances	Number of PM 2.5 Readings Over 40 µg/m <sup>3</sup> 24-hour average
2000	1	2	25	-
2001	4	9	24	-
2002	6	18	109	17
2003	1	2	36	22
2004	0	0	5	13
2005	3	8	40	38
2006	0	0	10	35
2007	6	24	38	32
2008	5	10	46	0
2009	2	3	15	2

## Real-Time Particulate Matter and Ozone Maps Online

The AQMD posts online real-time maps for particulate matter and ozone concentrations in Southwest Ohio. To view the concentrations (based on hourly averages), please visit [www.hcdoes.org](http://www.hcdoes.org).



Real-time map of particulate matter

## Pollen and Mold

The AQMD staff monitors pollen and mold levels on a daily basis and communicates these numbers to local media. Tree and grass pollens are the most common Southwest Ohio allergens and can be almost impossible to escape (see the chart below for the blooming schedules of certain trees). Ragweed, the most allergenic plant in North America, blooms from August through November. Mold spores are also present all summer and can even be found indoors year-round.

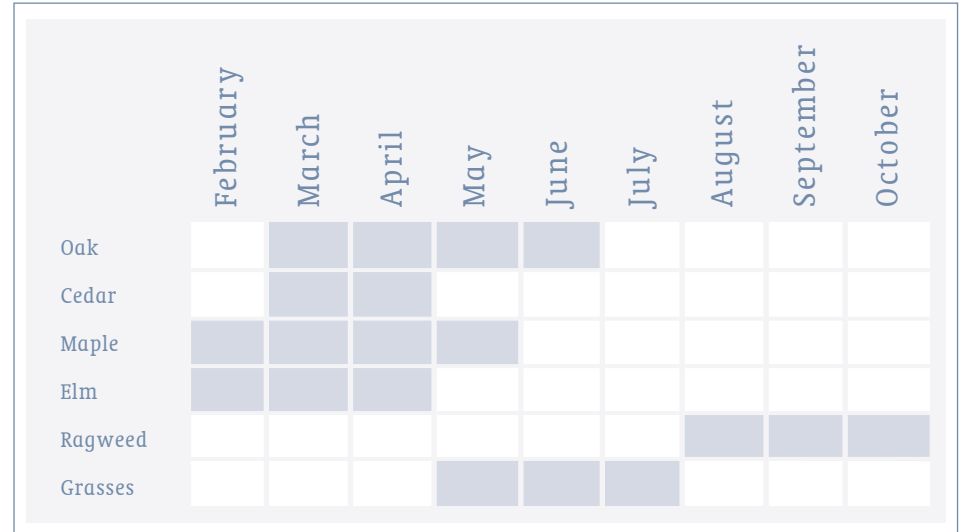
## Pollen and Mold Chart

	Pollen Grains per cubic meter	Mold Spores per cubic meter
Low	0 - 20	0 - 500
Moderate	21 - 100	501 - 1500
High	101 - 1000	1501 - 5000
Very High	> 1000	> 5000

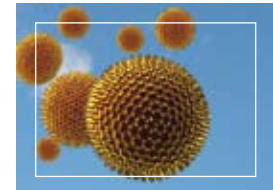


The AQMD produces a free “Living with Allergies” brochure which explains more about allergies in Southwest Ohio, their causes and how to handle their symptoms. For a free copy of the brochure call (513) 946-7747 or download a copy at [www.hcdoes.org](http://www.hcdoes.org). To keep track of the daily pollen and mold counts, residents can call the Pollen and Mold Hotline at (513) 946-7753 or visit [www.hcdoes.org](http://www.hcdoes.org).

## Prevalent Pollen Sources by Month



Ragweed blooms from August through November



Magnified pollen spore

### Air Toxic Monitoring Data

Air samples are collected in canisters and analyzed for 60 volatile organic compounds at four locations in the Greater Cincinnati area, including Addyston, Carthage, Winton Place and Lower Price Hill. Additionally, HCDOES operates one site in Middletown, OH in cooperation with the OEPA. Each canister collects a 24-hour composite sample on a 12-day cycle. Compounds can be reliably detected to approximately 0.2 ppb. Analytical results of these canister samples are reported in the AQMD's annual Data Report.

### Toxic Release Inventory (TRI) Data

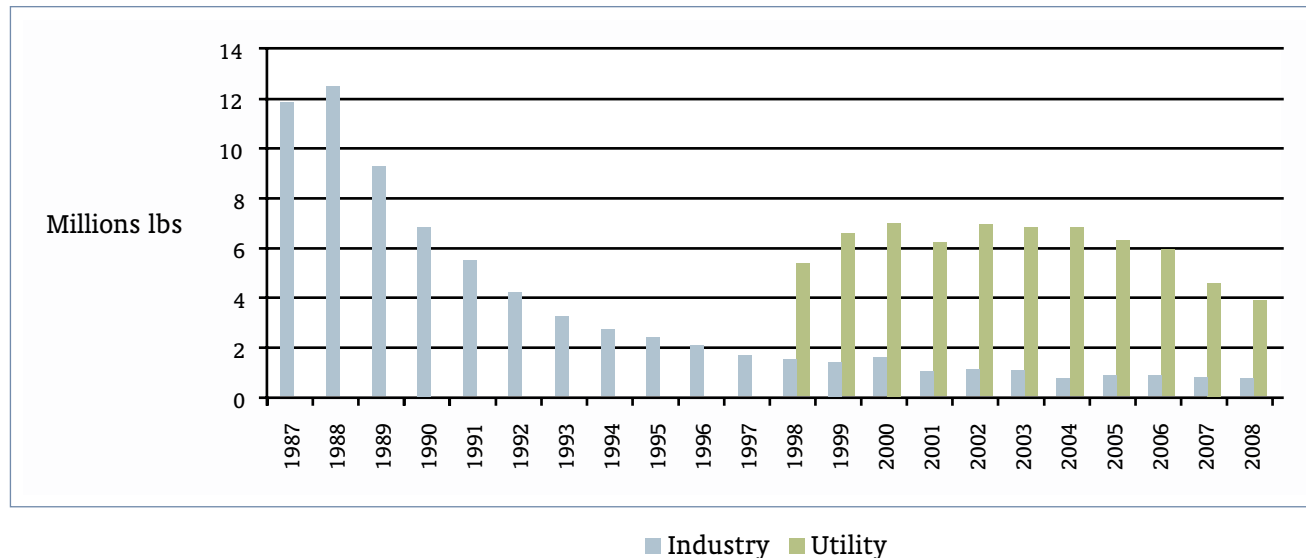
The TRI is an annual program which requires industry to report information on the transfer or release of more than 660 hazardous chemicals into the air, water or soil. Hamilton County has seen a steady decline in the amount of hazardous chemicals released to the air since its inception in 1987. Data can be found at [www.epa.gov/tri](http://www.epa.gov/tri).

### 2005 National-Scale Air Toxics Assessment

The USEPA released the results of the National-Scale Air Toxics Assessment (NATA) in June 2009. The purpose of this assessment is to identify and prioritize air toxics emissions across the U.S. and estimate the risk to the general population from exposure to these chemicals.

The chemical contributing the most risk at the national, state and local levels is benzene which is a component in gasoline. The second highest risk driver is carbon tetrachloride, an industrial solvent which has not been used in the U.S. since the early 1980s.

Toxic Release Inventory 1987-2008



## Air Toxics Report

In May 2009, HCDOES, with technical support from Toxicology Excellence for Risk Assessment (TERA), issued its first Air Toxics Report for Hamilton County to help residents understand what chemicals are in our air and what their presence means in terms of public health.

In the Air Toxics Report, the monitoring data from 2007 was analyzed and compared to USEPA's health guidelines to estimate potential health risks. The Air Toxics Report identified five chemicals of potential concern in Hamilton County, which are defined as those most likely to result in cancer and non-cancer health risks. The chemicals of concern are Acrylonitrile, Benzene, 1,3-Butadiene, Carbon Tetrachloride and Chloroform.

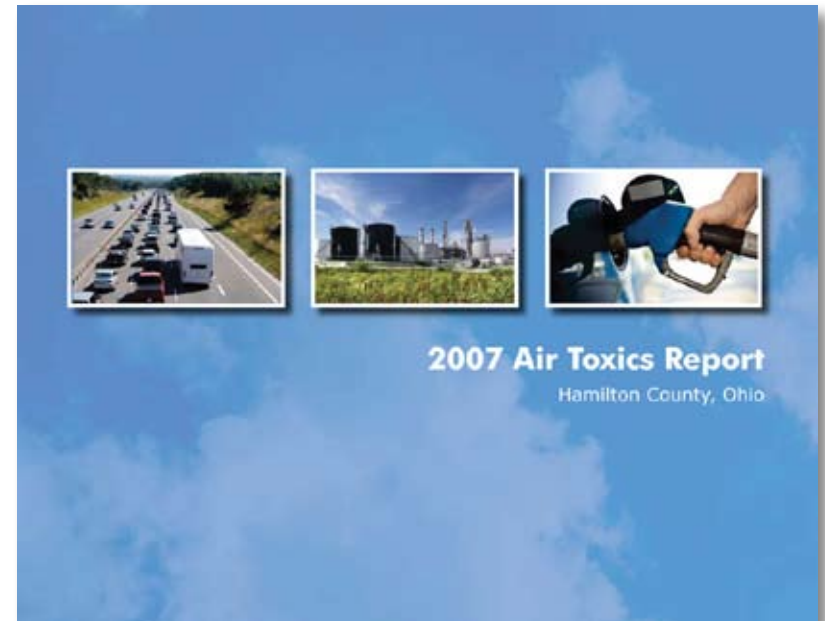
The total potential excess cancer risk in Hamilton County (based on all detected chemicals for 2007) is estimated to range from 3 to 44 additional cancers per 100,000 people, depending on the monitoring site. The 2007 Air Toxics Report was developed to be "health protective" and is therefore conservative in its methodology.

As a result of the 2007 analysis, HCDOES does not plan to add any additional monitoring sites in Hamilton County at this time. HCDOES' work on the Air Toxics Report was recognized by the Alliance for Chemical Safety with the presentation of the 2009 Risk Communication Excellence Award.

To view the Air Toxics Report, visit [www.hcdoes.org](http://www.hcdoes.org).

## Emissions Inventory

The AQMD staff collects data to determine annual pollutant emission totals. Stationary sources having a potential to emit at or above specified thresholds for the criteria pollutants are surveyed. Information received from these surveys is used to calculate annual emissions. Trends and contributions of each source are analyzed. Data may be used for dispersion modeling studies and for determining control strategies. The U.S.EPA also uses the information to estimate the number of ambient monitors locations statewide and nationally.



## Training and Development

Keeping up-to-date on the latest air quality issues affecting our region is essential to providing the highest level of air quality services to the residents served by the AQMD. Training and development opportunities are offered to staff members from the USEPA Air Pollution Training Institute. Staff members also attend local, state and national conferences and training courses focused on a variety of air quality topics. In 2009, HCDOES staff logged 1,460 training hours.

- Odor Training: Odor training is conducted annually at HCDOES to improve the odor detection skills of the AQMD staff and other local air quality personnel.
- Smoke School: Twice a year, the AQMD sends its employees to Smoke School. At Smoke School, employees are certified to read the opacity (lightness or darkness) of smoke and dust. By reading the smoke, inspectors can determine if facilities are in compliance with the visible emissions limits in facilities' permits.



AQMD staff and air quality personnel participating in Odor Training



AQMD employees participating in Smoke School

## Special Projects

The AQMD staff is actively involved in special projects on local, state and national levels, including:

**School Bus Retrofits:** The Southwest Ohio Clean Diesel Campaign (SWOCD) secured a \$1.08 million grant from the EPA in June, 2009, to replace 60, 1987–1993 school buses in seven school districts with new, and cleaner 2010 models. As a result, 15,000 pounds of pollutants will be removed from the air.

The USEPA Clean School Bus USA Grant was completed in 2009. A total of 81 school buses were retrofitted with diesel oxidation catalysts and crankcase ventilation filters in twelve school districts.

The Ohio EPA Clean Diesel Program awarded grants to three local school districts to retrofit school buses:

Little Miami School District	29 buses
Mason City Schools	8 buses
Southwest Local School District	16 buses

Upon completion of the above projects, the SWOCD will have retrofitted 519 and replaced 63 school buses, removing approximately 46,000 pounds of pollutants for the air.

Visit the SWOCD webpage at <http://www.hcdoes.org/CleanDieselCampaign/SOCD.htm>.

**EnviroFlash:** The Cincinnati area, including Butler, Clermont, Hamilton and Warren counties, participates in EnviroFlash, an air quality notification service. EnviroFlash is a free service that provides information about air quality, including air quality forecasts for upcoming days and Smog Alerts, in the location of your choice via a daily email. For more information and to subscribe to this service, visit [www.hcdoes.org](http://www.hcdoes.org) and click on the EnviroFlash link.



**Southwest Ohio Clean Diesel Campaign**

**Who We Are:**  
The Southwest Ohio Clean Diesel Campaign (SOCD) is a program established by the Hamilton County Department of Environmental Services in 2003 to reduce the emissions from diesel-powered school buses, trucks, and non-road equipment in Southwest Ohio.

**What We Do:**  
The SOCD works with school districts, bus companies, and other government departments in Southwest Ohio to secure funding to retrofit their diesel-powered equipment with emission reduction devices.

**Goals:**

- To reduce the pollution from diesel-powered engines including school, on-road vehicles and non-road vehicles.
- To retrofit all 1994-2004 diesel-powered school buses, approximately 800 in Southwest Ohio by 2012, to provide a cleaner, healthier ride for students.
- To educate transportation managers of the numerous emissions reduction devices available for diesel-powered engines.
- To promote the successes of the campaign to local news media outlets.

**Accomplishments:**  
Through previous grants, a total of 354 school buses have been retrofitted since 2004. As a result, approximately 25,000 pounds of pollutants have been removed from these buses annually.

Previous Grants Received	Year	Amount	Number of Buses
USEPA Voluntary Clean Diesel Retrofit Program	2003	\$120,000	81
Charge Foundation (now Duke Energy)	2005	\$100,000	140
Ohio Department of Transportation- Commuter Mitigation and Air Quality Grant	2006	\$24,000	34
Ohio EPA School Bus Diesel Retrofit Grant Program-			
Mason City School District	2007	\$31,400	40
Sycamore Community School District	2006	\$40,300	29

**Additional Resources:**  
[www.cummisemissionsolutions.com](http://www.cummisemissionsolutions.com)  
[www.dieselbus.com/en/en/](http://www.dieselbus.com/en/en/)  
[www.epa.gov/oaqps/northwest\\_retrofits.html](http://www.epa.gov/oaqps/northwest_retrofits.html)  
[www.epa.gov/oaqps/schoolbus/retrofit.htm](http://www.epa.gov/oaqps/schoolbus/retrofit.htm)

Number of School Buses Retrofitted = 224

**NCore:** The National Core Monitoring Network (NCore) will consist of 75 to 80 monitoring sites nationwide. The intent of these sites, located both in urban and rural areas, is to be “representative” of monitoring sites across the nation. USEPA intends to site these stations primarily to observe pollutant concentrations at the neighborhood (0.5 to 4.0 km) or urban (4 to 40 km) scales. These sites will assist in determining pollutant trends between regions over differing time periods.

Additional objectives are to be accomplished through these sites. These include:

- timely reporting of data to the public through AIRNow, air quality forecasting and other public reporting mechanisms
- support development of emission strategies through air quality model evaluation and other observational methods
- accountability of emission strategy progress through tracking long-term trends of criteria and non-criteria pollutants and their precursors
- support long-term health assessments that contribute to ongoing reviews of the National Ambient Air Quality Standards (NAAQS)
- compliance through establishing nonattainment/attainment areas by comparison with the NAAQS
- support multiple disciplines of scientific research, including: public health, atmospheric and ecological

The criteria pollutants, CO and SO<sub>2</sub>, are included in the NCore monitoring strategy because of their roles as precursors for other pollutants. Total reactive nitrogen oxides or NO<sub>y</sub> will be measured instead or in addition to NO<sub>2</sub>. These pollutants will be monitored at significantly lower levels. The monitoring equipment must be able to reliably measure low concentrations of these pollutants.

Additional pollutants to be monitored include PM<sub>2.5</sub> both gravimetric and continuous, speciated PM<sub>2.5</sub>, coarse PM, lead, ozone and basic meteorology. Future monitoring includes coarse PM speciation, ammonia and nitric acid. The Taft site has been selected by USEPA to be the Cincinnati NCore site. Additional sites in Ohio include Cleveland and Preble County. These sites are to be fully operational and collecting data no later than January 1, 2011. Cleveland and Cincinnati are the urban sites within the state. The Preble County site is designated as the rural site.

**“Team Rumpke”:** Historically, citizens have been concerned about issues that surround the operation of a landfill. In Hamilton County, Rumpke Sanitary Landfill has approximately 200 landfill gas recovery wells on 275 acres of placed waste in Colerain Township. Starting in August of 2009, Rumpke reported elevated temperatures in its landfill consisting of approximately 12 acres. “Team Rumpke” was developed with experts from Ohio EPA, USEPA, Hamilton County Public Health, Colerain Fire, AQMD and Rumpke. A comprehensive action plan was developed with an overarching goal of protecting human health and safety and preventing a nuisance situation. The AQMD has conducted extensive amounts of air monitoring and oversight on the project.

## Air Quality Community Outreach and Education

The AQMD delivers comprehensive air quality education and outreach activities to students, parents, educators, businesses and community members in Southwest Ohio. The AQMD's programs and educational materials teach the importance of air quality awareness to deliver a cleaner, healthier tomorrow. Below is a sampling of the strategic education and communication activities coordinated by the AQMD:

### Education

*Classroom Resources:* The AQMD is proud to offer educators free materials to raise awareness of air quality issues in the classroom. AQMD distributes activity books, brochures, lesson plans, pencils and other incentives for students to teachers for free. In 2008, 56 educators in Southwest Ohio received approximately 2800 free materials to enhance air quality education in their schools. AQMD also creates and distributes a newsletter, "The School Breeze" specifically designed for educators.



*Classroom Presentations:* The AQMD provides air quality information to students through classroom presentations and grade or school-wide assemblies. In 2009, 16 schools in Southwest Ohio received "Do Your Share for Our Amazing Air" presentations. The "Do Your Share for Our Amazing Air" presentations feature science experiments and lessons to teach students about smog, ozone and particulate matter. The presentations empower students to take steps to clean up the air.



*Cincinnati State Technical and Community College Training Courses:* As part of Cincinnati State's air pollution class, each quarter AQMD staff members teach the latest information on air quality permitting, enforcement and monitoring. Students are invited to HCDOES for air pollution classes and AQMD staff show students the equipment and tools needed to monitor and analyze air samples.



### Outreach

*HCDOES Youth Council:* The AQMD and Solid Waste Management District have teamed for the second year to form the HCDOES Youth Council for area high school students. The Youth Council gives students the opportunity to learn about air quality and recycling issues, work in a team environment with community leaders and discover how to make changes in their schools and community. The first meeting was held in September with members present from 12 schools. The Youth Council format allows students to convey preferences for environmental topics to be covered at meetings, work on service learning projects, volunteer opportunities as well as gain resources needed to accomplish goals as members of the Youth Council.



*No Idle Zone Campaign:* HCDOES has been pleased to offer “No Idle Zone” signs to schools and communities in an effort to promote cleaner, healthier air by encouraging drivers to turn the key and be idle free. The signs, which read, “Turn Engine Off Breathe Better, Save Money” have successfully been distributed and posted in Butler, Clermont, Hamilton and Warren Counties. Nearly 100 signs were requested for schools, school districts as a whole, community centers, daycare facilities and higher education institutions.

Participating schools include:

- Cincinnati State Community & Technical College
- Franklin City Schools
- Princeton Schools
- Felicity Franklin Schools
- Indian Hill Schools
- Badin High School
- Liberty Bible Academy
- Monroe Elementary
- Mt. Auburn International Academy
- Charles T. Young Elementary School
- Tender Age Learning Center



*Events:* The AQMD attends events in the community to speak directly with citizens regarding air quality issues. The AQMD staff aim to answer citizens' questions while distributing supplemental information. In 2009, the AQMD staff members attended local events such as health and wellness fairs, community festivals, and numerous Earth Day events to promote air quality awareness throughout the four-county region.

*Publications:* The AQMD creates and distributes various publications from our quarterly newsletter, “The Community Breeze” to our yearly publications such as the Data and Progress Reports. These free publications range from air quality topics such as allergies and open burning to anti-idling and diesel exhaust. For a complete list of publications available, visit our website at [www.hcdoes.org](http://www.hcdoes.org).



*Presentations:* The AQMD conducts presentations on air quality issues to interested groups including community organizations, senior centers, local libraries and businesses.

To learn more about the AQMD's outreach and education programs or to schedule a presentation, please call (513) 946-7754 or visit [www.hcdoes.org](http://www.hcdoes.org).



# 2009 Budget Summary

## Hamilton County Solid Waste Management District Budget

### Revenue

Landfill Tipping Fee	\$2,716,077
FEMA Reimbursement	276,468
Other	6,530
<b>Total</b>	<b>\$2,999,075</b>

### Expenditures

Salary	\$366,119
Fringe Benefits	103,526
Storm Debris Clean Up	70,349
Equipment	5,175
Indirect Cost	58,850
Health Department	349,150
Others	59,022
Programs and Services	1,924,208
<b>Total</b>	<b>\$2,936,399</b>

## Hamilton County Air Quality Management Division Budget

### Revenue

State	
Title V	\$1,513,691
Non-Title V	643,581
Enforcement Dollars	74,619
Federal	
AQ Programs	614,019
PM 2.5 Programs	217,409
Local Permit Fees	452,318
<b>Total</b>	<b>\$3,515,637</b>

### Expenditures

Salary	1,936,09
Fringe Benefits	555,392
Training and Travel	38,675
Equipment	129,909
Supplies	29,253
Contractual	256,082
Others	31,414
Indirect Cost	246,785
Enforcement Dollars	74,619
PM 2.5 Program	217,409
<b>Total</b>	<b>\$3,515,637</b>