

Air Aware

WINTER 2010

A Publication of the
Yolo-Solano Air Quality
Management District

VOCs

Volatile organic compounds (VOCs) are found both indoor and outdoors. Concentrations of many VOCs are consistently higher indoors (up to ten times higher) than outdoors but both are a concern.

VOCs are found in paint, caulk, cleaning supplies, carpet, wood, disinfectants, moth repellents and air fresheners; stored fuels and automotive products; hobby supplies; dry-cleaned clothing even items from the grocery store -- and they can be damaging to your health. You cannot entirely eliminate these compounds from your daily life, but you can minimize the amount.

VOCs are gases released as materials age and degrade over time. There are hundreds of VOCs--from formaldehyde and ethanol to vinyl, adhesives and varnishes. Even felt-tip pens are a source. The smell in a new car is an example of VOCs, as the interior plastics emit gases.

VOCs can cause allergic reactions such as asthma, headaches, upper respiratory infections, rashes and even cancer.

Wallcoverings and VOCs

- Read labels to find low-VOC products and purchase nontoxic paint.
- Use water-based polyurethane that emits fewer gases than oil-based products. For the same reason, natural or low-VOC stains, sealant and varnishes are also healthier choices.
- Avoid vinyl wall covering, as well as vinyl upholstery and flooring. Vinyl is a chemical radical emitting various gases.
- Tightly rolled wallpaper can trap gases, so unroll outdoors to allow gases to dissipate before hanging indoors.

Low-VOC Flooring Alternatives

- Vinyl and synthetic carpets are high in VOCs. Instead look for natural fibers such as wool, sisal and cotton.
- Although hardwood floors are easy to clean and might seem like a good solution, hardwoods include formaldehydes, and all finishes emit VOCs. A good alternative is presealed hardwood,

or hardwood sealed with water-based polyurethane.

- Ceramic tile is inert, emitting no gases. Linoleum is clinically nontoxic. Other allergy-friendly flooring includes bamboo, cork or recycled glass.
- To minimize the VOCs found in adhesives, select low-VOC or water-based products.
- Carpet should include a low-emission level (indicated by a Carpet and Rug Institute tag). Select carpet that is free of chemical with a low nap. Avoid installation in damp areas (bath and kitchen). Install with tack strips, rather than adhesive and make sure a moisture barrier is in place before the carpet is installed.

Other Steps to Reduce Exposure

Increase ventilation when using products that emit VOCs. Meet or exceed any label precautions. Do not store opened containers of unused paints and similar materials within the home. Formaldehyde, one of the best known VOCs, is one of the few indoor air pollutants that can be readily measured. Identify, and if possible, remove the source. If not possible to remove, reduce exposure by using a sealant on all exposed surfaces of paneling and other furnishings. Use integrated pest management techniques to reduce the need for pesticides.

- Use household products according to manufacturer's directions.
- Throw away unused or little-used containers safely; buy in quantities that you will use soon.
- Keep out of reach of children and pets.
- Never mix household care products unless directed on the label.

VOCs and Ozone

Ground-level or "bad" ozone is not emitted directly into the air, but is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOC) in the presence of sunlight. Emissions from industrial facilities and electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents are some of the major sources of NOx and VOC. Reducing these emissions will also reduce ground-level ozone.

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Volatile organic compounds (VOCs) are found in paint, caulk, cleaning supplies, carpet and wood and can be damaging to your health and can help to create ozone.

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INDOOR AIR CLEANERS



The California Air Resources Board (ARB) adopted a regulation to limit ozone emissions from indoor air cleaning devices. After October 18, 2010, all indoor air cleaners sold in, or shipped to, California must meet certain ozone emission and electrical

safety standards. These air cleaners must produce an emission concentration less than 0.050 parts per million (ppm) of ozone. The packaging must be labeled to indicate the air cleaners are certified.

What are ozone-generating air cleaners?

Some indoor “air purifiers” or air cleaners emit ozone, a major component of outdoor smog, either intentionally or as a by-product of their design. Those that intentionally emit ozone are often called “ozone generators.” Manufacturers sometimes inappropriately refer to ozone as “activated oxygen,” “super oxygenated” or “energized oxygen,” implying that ozone is a healthy kind of oxygen. Because ozone reacts with some other molecules, manufacturers claim that the ozone produced by these devices can purify the air and remove airborne particles, chemicals, mold, viruses, bacteria, and odors. However, ozone is not effective at cleaning the air except at extremely high, unsafe ozone levels, and then it is only partially effective. Ionizers and electrostatic precipitators are other types of air cleaners that emit ozone, but do so as a by-product of their design and function.

How much ozone do ozone generators produce?

Studies have shown that ozone generators can produce indoor ozone levels several times the state outdoor health standard of 90 parts per billion (ppb) for one hour, as well as the eight hour

standard of 70 ppb. In one experiment, a level of 300 ppb was measured in a house after 1-2 hours of ozone generator use. Ozone levels were about twice the health standard levels when the ozone generator was set on the maximum setting and the central fan was either on or off. Ozone levels were almost twice the health standard levels in the near room even when the device was set to a medium setting. These concentrations are equal to, or worse than, a first stage smog alert. It is clear that the ozone concentrations produced by these devices can easily exceed health-protective standards.

Instead of using an air cleaner, consumers are encouraged to first eliminate or reduce indoor pollution sources and to ventilate well with outdoor air. The most effective method of controlling indoor air pollution is through prevention: eliminating pollution at its source. To minimize the release of pollutants indoors:

- follow directions on consumer products such as cleaning agents, paints, and glues;
- properly maintain and operate gas- and wood-burning appliances;
- restrict smoking to outdoor areas;
- purchase building materials and wood furniture that do not emit formaldehyde;
- use candles and incense sparingly, if at all; and
- clean frequently and thoroughly to prevent dust and mold build-up.

Use plenty of ventilation: be sure there is adequate airflow to/from the outdoors. This can be achieved by opening windows, using exhaust fans near pollutant sources (e.g. above gas stoves), and increasing airflow through the use of mechanical ventilation systems. If your home is equipped with a central forced air system, you should also consider upgrading the filter.

Further details, including a list of brands and models of ozone generators, can be obtained at: www.arb.ca.gov/research/indoor/ozone.htm

CLEAN AIR FUNDS

The District’s fiscal year 2010-11 Clean Air Funds Program application period begins late January. Approximately \$410,000 is available to fund projects that reduce emissions from mobile sources and is awarded on a competitive basis.

The District estimates that approximately \$250,000 (AB2766) will be available for projects sponsored by public and private organizations in Yolo and eastern Solano Counties. An additional \$160,000 (AB8) is available to public agencies in northeastern Solano County only.

Applications, due March 26 with no late applications accepted,

are selected on a competitive basis and can be filed in four categories:

- 1) Clean Technologies/Low Emission Vehicles
- 2) Alternative Transportation
- 3) Transit Services and
- 4) Public Information/Education

The Yolo and STA Clean Air Funds Committees make funding recommendations to the District’s Board of Directors, with the Board taking action at the June 9 board meeting. For more information contact the District at (530) 757-3650 or (800) 287-3650 or visit www.ysaqmd.org.

STATS: October 1, 2009 - December 31, 2009

ATC Applications Received	24	Complaints Investigated	9	AG Engines Registered	28
ATC Applications Processed	26	Inspections Performed	248	AG Engines Inspected	87
PTO Applications Received	48	Notices of Violation (NOV)	13	PERP Engines Inspected	66
PTO Applications Processed	42	Notices to Comply (NTC)	0	Notices of Violation (NOV)	16

RULES UPDATE

Proposed Amendment: Gasoline Dispensing Facilities

The District is considering amendments to Rule 2.22 - Gasoline Dispensing Facilities. One of the changes under consideration is an exemption from Phase II (dispensing into vehicles) vapor recovery equipment requirements for E85 fueling operations and facilities that exclusively refuel their own fleet of onboard refueling vapor recovery (ORVR) equipped vehicles only. Another possible change would be to require International Code Council (ICC) certification for vapor recovery equipment installers, testers, and repair personnel doing business within the District. In addition, the District will make numerous minor changes to clarify rule requirements. Rule workshops and hearings for amendments to Rule 2.22 are tentatively scheduled for early 2010. For additional information, contact Gary Ma at (530) 757-3671.

Proposed Revision: District Rule 2.27 for Industrial, Institutional, and Commercial Boilers, Steam Generators and Process Heaters

The District is currently working on a revision to District Rule 2.27 that would propose to lower the emission limits for boilers permitted in the District. The District currently has approximately 200 sources that are subject to the rule. The current rule imposes limitations on carbon monoxide (CO) and nitrogen oxide (NOx) emissions from all boilers rated 5 million British Thermal Units (BTU) per hour and higher. For additional information contact Rene Toledo at (530) 757-3679.

Proposed Rule: Biomass Boilers

The District is currently developing a new rule that would affect facilities that use biomass material, such as wood, as a fuel for boilers. The rule is required as part of a State Implementation Plan (SIP) commitment by the District. The District currently has one permitted source and one proposed source that would be subject to the rule. The proposed rule would implement emission limitations and other possible requirements for biomass boilers. For additional information, contact Courtney Graham at (530) 757-3655.

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MONITORS

The District is conducting a special purpose monitoring study in Dixon during the fall and winter of 2009/2010. The study will use an 'e-sampler' device to monitor particulate matter (PM) levels in the city over this time period, which is when PM levels tend to increase. While the District operates full-time PM monitors in several jurisdictions, there is no permanent monitor in Dixon. This year's study will help assess whether other nearby monitors accurately reflect levels of PM in Dixon. The accurate measurement of PM is important because PM can cause respiratory problems, especially in sensitive populations.



The Dixon study follows a similar study conducted in Winters during the 2008/2009 season. That study showed that PM levels monitored in Winters from November through April were on average slightly lower than those recorded at the nearest permanent PM monitor in Woodland.

While scarce resources limit the number of permanent monitors that the District can deploy, the District arranges available monitors so that the network can adequately characterize pollutant levels throughout Yolo County and our portion of Solano County. The study is part of a continuing process for ensuring that the District's monitoring network represents all jurisdictions.

Once the Dixon monitoring study is completed, District staff will compile the results of the study in a report that will be made available to the public.

Pursuant to California Health and Safety Code Section 40923, the District posts the proposed regulatory measures that may be adopted or amended by the Yolo-Solano Air Quality Management District Board of Directors during the 2010 calendar year. For the complete list go to:
www.ysaqmd.org/rules-dev.php.

BOARD OF DIRECTORS

As a public health agency, the Yolo-Solano Air Quality Management District's role is to protect human health and property from the harmful effects of air pollution.

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Mayor, Rio Vista

Board meetings are held at 9 a.m. the 2nd Wednesday of each month at the YSAQMD office located at 1947 Galileo Court, Suite 103, Davis. The public is welcome to attend. For a current agenda go to www.ysaqmd.org or call (530) 757-3650 or (800) 287-3650.

Mat Ehrhardt, P.E.
*Executive Director/
Air Pollution Control Officer*

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CALENDAR

January 13, 2010 9:00 AM
YSAQMD Board of Directors

Clean Air Funds Program
Applications available late
January.

February 10, 2010 9:00 AM
YSAQMD Board of Directors

March 10, 2010 9:00 AM
YSAQMD Board of Directors

March 26, 2010
Deadline for Clean Air Funds
applications

March 31, 2010
2009 Throughput Reports Due

District Rule 2.34 Date TBA
Stationary Gas Turbines
Proposed Amendments

District Rule 3.8 Date TBA
Federal Operating Permits
Proposed Amendments Workshop

Mower Exchange Program
Spring 2010 Date TBA

Breathe California May 26
Clean Air Awards Luncheon
Nominate Your Champion
www.sacbreathe.org

BURN WISE

Just a reminder during the winter months to help reduce wood smoke pollution by adhering to “**Don’t Light Tonight**” advisories available by signing up for **Enviroflash** at www.ysaqmd.org and following these tips:

- Burn only dry, seasoned wood. It’s better for the air and your wallet. Look for wood that is darker, has cracks in the end grain, and sounds hollow when you hit against another piece of wood. Dry seasoned wood is more efficient at heating your home and can add up to significant savings over the winter. Never burn painted or treated wood or trash.
- Maintain your wood stove or fireplace and have a certified technician inspect it yearly. They can clean dangerous soot from your chimney and keep your wood stove or fireplace working properly which reduces your risk of a home fire.
- Change to an EPA certified woodstove or fireplace insert. These models are more efficient than older models, keeping your air cleaner, your home safer and your fuel bill lower, while keeping you warm in the winter.

Remember, woodsmoke, a mixture of gases and fine particle pollution, is not healthy to breathe indoors or out - especially for children, older adults and those with heart disease, asthma or other lungs diseases.

PERMIT HOLDERS

All permit holders should receive a **Throughput Production Report** (Report) packet in the mail by mid-January.

A **Permit Holder Advisory** was mailed in November. The advisory explains the report process for first-time submitters as well as changes to the process for our regular submitters.

If you did not receive a copy of the advisory, notify the District. If the report forms and instructions applicable to each of your permitted processes are not enclosed in your packet, notify the District immediately and the documents will be sent to you.

Report forms may also be downloaded from our website at www.ysaqmd.org/permits-forms-apps.php or click on **Forms and Applications** on the home page’s right side bar. Instructions accompany each form and they are available for the following areas: General, Internal Combustion Engine, Gasoline Storage & Dispensing and Coating Operations.

New this year! To make the report process easier, there are three separate forms for Coating Operations: Automotive, Metal Parts and Wood Products.

These reports are due no later than **March 31, 2010**. If you have any questions or concerns, call our Engineering Division at (530) 757-3650 or (800) 287-3650.

STATEWIDE AIR QUALITY INFORMATION



Mat Ehrhardt, the District’s executive officer was recently elected president of CAPCOA, the California Air Pollution Control Officers Association. CAPCOA is a non-profit association of the air pollution control officers from all 35 local air quality agencies throughout California. Formed in 1976 to promote clean air and to provide a

forum for sharing of knowledge, experience, and information among the air quality regulatory agencies around the state, the association promotes unity and efficiency, and strives to encourage consistency in methods and practices of air pollution control.

CAPCOA sponsors numerous training opportunities throughout the year in order to provide local district staff and industry with the latest information on air pollution control techniques. It actively promotes public health and meets regularly with federal and state air quality officials to develop statewide rules and to assure consistent application of rules and regulations. CAPCOA partici-

pates in the development and implementation of air quality bills that speed progress toward healthful air quality, reduce costs, and generally streamline air quality laws.

In August 2010, CAPCOA along with co-hosts, the California Air Resources Board and the U.S. Environmental Protection Agency, is sponsoring a **Climate Change Forum** in San Francisco. With a focus on facilitating leadership and progress with top-level dialog, the Forum will offer an insightful look at current and pending legislation, regulations, and voluntary actions at the federal, state, and local levels, and how these are interacting with each other.

Despite great strides, California still has some of the worst air quality in the nation, and needs to do more. Our growing population and diverse economy makes this a special challenge. Through the leadership of air quality professionals like Mat, CAPCOA is meeting these issues head-on. Members of CAPCOA work with specialized task forces (including regulated industry), participate actively in the legislative process, and continue to coordinate local efforts with those of the state and federal air agencies. Together, these leaders in the field of air quality strive to protect public health while maintaining economic vitality.