DESERT BREEZE

VOLUME II ISSUE 4 DECEMBER 2014

12 TIPS TO ENJOY YOUR FIREPLACE SAFELY

1) The National Fire Protection Association recommends that chimneys be swept at least once a year at the beginning of the winter to remove soot and debris.
2) Inspect chimney cap regularly and replace when needed.
3) Watch for soot buildup in the chimney of your wood-burning fireplace. Soot is softer than creosote, flammable and should be cleaned out of the chimney regularly.
4) If possible, burn hardwoods like maple, oak, ash and birch. The advantages of hardwoods are that they burn hot and long; have less pitch and sap, making them cleaner to handle; and tend to cause less creosote buildup.
5) Consider installing a stainless steel liner that will withstand even the highest temperatures and will keep the fire and its embers contained.
6) Burn firewood and only firewood! Crates, lumber, construction scraps, painted wood, or other treated wood releases chemicals into your home, compromising air quality.
7) Install carbon monoxide detectors and smoke detectors in your house — near your wood fireplace as well as in bedroom areas.
8) To burn a fire safely, build it slowly, adding more wood as it heats. Keep the damper of your wood fireplace completely open to increase draw in the early stages. Burn the fire hot, at least occasionally—with the damper all the way open to help prevent smoke from lingering in the fireplace and creosote from developing.

9) Be certain the damper or flue is open before starting a fire. Keeping the damper or flue open until the fire is out will draw smoke out of the house. The damper can be checked by looking up into the chimney with a flashlight or mirror. Do not close the damper until the embers have completely stopped burning.
10) Never leave a fire in the fireplace unattended. Make sure it is completely out before going to bed or leaving the house.
11) Keep a fire extinguisher on hand.
12) Allow ashes to cool fully before you dispose them, and best to leave them in your fireplace until the following morning if you've enjoyed a fire the night before.

AMBIENT AIR MONITORING

The Eastern Kern Air Pollution Control District (District) participates within a large network (some 200 + sites in California) of air monitoring stations sanctioned by either (or both) the California Air Resources Board (ARB) and the Federal Environmental Protection Agency (EPA). The District services four monitors at 3 different sites: Canebrake, Tehachapi, and Ridgecrest. There are also two monitors in Mojave which are overseen by ARB.

What is air monitoring?

The EPA defines it as "the systematic, long-term assessment of pollutant levels measuring the quantity and types of certain pollutants in the surrounding, out-door air".

*There are many types of pollut*ants that can be monitored, but our criteria is based on the EPAs National Ambient Air Quality Standard; therefore, we monitor for the following pollutants: particulate matter 2.5 micron or smaller ($PM_{2.5}$), particulate matter 10 micron or smaller (PM_{10}), and ozone. Other hazardous air pollutants of a concern, such as oxides of sulfur, carbon monoxide, oxides of nitrogen (NOx), volatile organic compounds (VOC), chromium, mercury, and lead, are not monitored specifically by the District, but are often monitored by sources that have the potential to emit these pollutants into the atmosphere.

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AMBIENT AIR MONITORING

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Where do $PM_{2.5}$ and PM_{10} come from?
Sources of fine particles ($PM_{2.5}$) include all types of combustion activities (motor vehicles, power plants, wood burning, etc.) and certain industrial processes. PM_{10} particles are referred to as "coarse." Sources of coarse particles include crushing or grinding operations, and dust from paved or unpaved roads. Other particles may be formed in the air from the chemical change of gases. They are indirectly formed when gases from burning fuels react with sunlight and water vapor. These can result from fuel combustion in motor vehicles, at power plants, and in other industrial processes.

Where does ozone come from?
Tropospheric, or ground level ozone, is not emitted directly into the air, but is created by chemical reactions (incited by solar energy) between NOx and VOC. Ozone can reach unhealthy levels on hot sunny days in urban environments. Ozone can also be transported long distances by wind.

For this reason, even rural areas can experience high ozone levels.

How do we monitor the air?
CARB and EPA have strict guidelines on how monitors are deployed and administrated. There are specific equipment designed to measure each pollutants (currently there is not one machine that measures all pollutants). There are Quality Assurance Project Plans and Standard Operating Procedures in place to ensure that all monitoring throughout the state is performed within the same standard (network of some 200 + monitors).

Our data (and analysis of data) are then sent to AQMIS (Air Quality and Meteorological Information System). This data is made public (on line) for anybody to observe and study.

Conclusion:
National Ambient Air Quality Standards (NAAQS), set by EPA, determines whether or when a particular district is in "attainment" with PM_{10}, $PM_{2.5}$, and ozone. Attainment is an achievement of having "good" air quality based on a standard set by the EPA NAAQS.

Ambient air monitoring is an ongoing process that allows us to evaluate our progress quantitatively and objectively. It also allows the District to monitor the air quality over time and assess progress in air quality in the area. Without air monitoring, we have no concrete measurement to evaluate where we were, where we are, and where we're going with our air quality. The investment that we make with our time and our financial resources (air monitoring equipment and the servicing of it can be very expensive) is extremely critical in our goal of attaining a more healthy atmosphere for all.

WHAT IS CHLORINE?

- Pure Chlorine (Cl_2) is a green gas, more than twice as heavy as air, composed of two Chlorine atoms.
- Chlorine is a naturally occurring element; and, like Boron, is essential to life. In the body it helps regulate the movement of fluids.
- Chlorine has a distinctive characteristic disagreeable odor at very low concentrations.
- Chlorine gas at higher concentrations is suffocating and poisonous.
- Because Chlorine is heavier than air and has a very distinctive odor, it is easily detected at ground level; and, can be avoided when necessary.
- Despite the dangers posed by Chlorine, it is valuable chemical with a variety of beneficial uses.
- Chlorine is highly reactive and will readily combine with other elements and bond with other salts. Sodium Chloride (NaCl), also known as Salt, is an example of a beneficial form and use of Chlorine in daily life.
- The reactive nature of Chlorine makes it a useful industrial chemical for applications that include oxidation, bleaching, and disinfection (sodium hypochlorite – household bleach).
- It can be used either directly or indirectly in the manufacture of consumer products, plastics, solvents, petroleum products, insecticides, medicines, antiseptics, textiles, paper products, and even food.

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WHAT IS CHLORINE? (*Continued from Page 2*)

- Generally, only found in industrial settings, the health effects of exposure to high levels of Chlorine gas can be severe.
- Normal exposure to bleach and swimming pool Chlorine are not dangerous exposures to Chlorine.
- Depending on the nature of the exposure to Chlorine (duration, source, route, and concentration) health effects can range from skin and eye irritation, coughing and chest pain to fluid in the lungs, and even death. Exposures of this severity are not commonly found in the environment; but, are the result of industrial uses and exposures.

As stated before, Chlorine, is a necessary element, and is found in many different compounds we use every day, like: table salt and household bleach. For those folks with swimming pools, use of muriatic acid (hydrochloric acid) and chlorine tablets are probably commonplace.

For agricultural operations, potassium chloride (potash fertilizer) is used in the growing of many crops. Additionally, chloropicrin is a broad-spectrum antimicrobial, fungicide, herbicide, insecticide, and nematicide used to protect many crops including strawberries, peppers, and nuts.

Our drinking water is clear and free of many harmful bacteria because of aluminum chloride, ferric chloride, and chlorine gas used to treat water before it is piped to our homes. Additionally, chlorine gas and ferric chloride are used to treat wastewater after it leaves our homes.

Many industries in the District use and emit chlorine in one of it's many forms. However, chlorine emissions in the form of chlorine gas, ferric chloride, hydrochloric acid, and chloropicrin are well controlled and have not posed a health risk to the community at large.

DISTRICT RULE DEVELOPMENT

Air pollution can threaten our health, environment, and economy. Under direction of the United States Environmental Protection Agency (EPA) and California Air Resources Board (CARB), the District has developed and implemented many rules and regulations designed to reduce air pollutants being emitted from local source activities including: Open burning, fuel burning, gasoline storage, solvent use, dry cleaning, various coating operations, cement production, mining, construction, agricultural sources, landfills, and more.

The District revises and develops rules as technology and control efficiency progress in order to continually improve air quality. Rule development can be a very lengthy process because there are many guiding principles and procedural steps to consider.

Guiding Principals

- Meet environmental goals in the most efficient and effective manner.
- Respect all different points of view and knowledge.
- Identify every player with stake in the outcome of the regulations.
- Strengthen and refine rules to better protect public health, the environment and the economy.
- Provide businesses flexibility to meet air quality goals in a way that works best for them, allowing them to be cleaner at a lower cost.
- Develop and promote voluntary cooperative programs. Explore incentives to reduce emissions beyond mandated limits by creating partnerships with business, the environmental community, and the public.

Development Steps

- District staff discusses an identified air pollution problem.
- District performs a preliminary analysis of the various options for addressing the problem.
- District meets with the affected stakeholders.
- Initial Draft or Revision of Proposed Rule is developed.
- District conducts one or more public workshop to allow discussion with all affected and interested parties.
- Copy of draft/revised rule is forwarded to EPA and CARB for their input.
- District presents draft/revised rule to the Board of Directors at a regularly scheduled meeting for adoption. District assembles a State Implementation Plan (SIP) package, for a rule that has commitments under the California SIP, and forwards it to CARB for submittal to the EPA.

REMINDER !!!
The DMV Grant Funds Program DEADLINE TO SUBMIT PROJECTS IS JANUARY 9, 2015.
For application package see website www.kernair.org or call 661/862-5250.

Board of Directors

Ed Grimes, Chair (Councilman, Tehachapi)

Zach Scrivner, Vice Chair (KC 2nd District Supervisor)

Chip Holloway (Vice Mayor, Ridgecrest)

Patrick Bohannon (Mayor, California City)

Mick Gleason (KC 1st District Supervisor)

Board of Directors usually meet once every two months starting in January at various locations.

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Bill Deaver

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For news updates and other information, please visit the Eastern Kern APCD website at www.kernair.org

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