



# DESERT BREEZE

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## MOTOR VEHICLE EMISSION REDUCTION PROGRAM

The District's Motor Vehicle Emission Reduction Program (MVERP) awards up to \$50,000 (per project) in grant funds for projects that reduce oxides of nitrogen (NOx), reactive organic gas (ROG) or particulate matter (PM<sub>10</sub>) emissions from on-road motor vehicles. Eligible projects include: public road paving, replacing older high-emitting vehicles with new low-emitting vehicles including hybrid and electric, educational activities related to air quality, telecommunication and videoconferenc-

jects are then presented to the District's Governing Board for approval. The District generally has approximately \$325,000 in MVERP funds available each fiscal year and the program is usually over subscribed. On average, fifteen to twenty projects per fiscal year are awarded MVERP funds.

Road paving and vehicle replacement projects have historically been the most popular with a recent increase in public education primarily geared toward school age children.



ing, commuter vanpooling, and innovative vehicle emission reduction strategies.

The application submission period begins October 1<sup>st</sup> of each year and ends the second Friday of January at 5 pm. A town hall style meeting is held in March of each year. At this meeting an MVERP Grant Committee will rank and select the projects. The recommended pro-

The photographs above depict a recently completed road paving project in the Squirrel Valley area/Lake Isabella. Approximately 700 linear feet by 20 feet of Acorn Road starting at Piute Hill and ending at Indian Rock was graded and paved. This project was awarded \$24,300 in MVERP grant funding and is estimated to reduce approximately 0.73 tons of particulate matter annually.

## WHY DOES THE AIR DISTRICT EXIST? (A LITTLE HISTORY)

The question of, why the Eastern Kern Air Pollution Control District (District) exists sometimes arises. The short answer is to attain the State and Federal air quality standards; however, the history is a little deeper.

In 1967, the California's Legislature passed the Mulford-Carrell Act (signed by then-governor Ronald Reagan), which combined two Department of Health bureaus--the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board--to establish the Air Resources Board (ARB).

The next year, by resolution, on the 12<sup>th</sup> of March 1968, the Kern County

Board of Supervisors created the Kern County Air Pollution Control District. Within the resolution it states: "...the air within Kern County is so polluted, or is likely to become so polluted, with air contaminants as to be injurious to health..., so that there is need for the Air Pollution Control District in Kern County to be activated and function."

In 1970, during the Nixon Administration, the President's Advisory Council on Executive Organization recommended that key anti-pollution programs be merged into an Environmental Protection Administration, a new independent agency of the Executive Branch.

This new Administration was to be tasked with repairing the environmental damage already done and to establish new criteria to guide us in the future. On December 7, 1970, the Environmental Protection Agency was

formed.

Over the past 45 years the Eastern Kern Air Pollution Control District (named changed from Kern County Air Pollution Control District in 2010) has been a part of the improved air quality in Kern County. Cement dust no longer accumulates on telephone lines and Emission Inventories have shown pollution released into the atmosphere has decreased. Obviously, our work is not done (and probably will never be), because of issues like wind blown dust and accidental emission releases, just to name a couple.

We have to promote and protect public health, welfare and ecological resources through the effective and efficient reduction of air pollutants, while recognizing and considering the effects on our economy. It is all about the people, making sure we can live, breath, and work today and tomorrow.



## WHAT IS AIR POLLUTION?

Very small amounts of certain air contaminants can cause serious health and environmental problems. Typically, clean air is a mixture of about 78 percent nitrogen; 21 percent oxygen; less than 1 percent of carbon dioxide, argon, and other gases; and varying amounts of water vapor. If there are other particles or gases in the air that are not part of its normal composition, we call this "air pollution" and the particles or gases are called "air pollutants."

The Eastern Kern Air Pollution Control District (District) regulates many different pollutants, four are called criteria pollutants, PM<sub>10</sub>, oxide of sulfur (SO<sub>x</sub>), oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOC). SO<sub>x</sub> is a precursor, which in the presence of moisture and heat, can form sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), also know as acid rain. NO<sub>x</sub> and VOC are considered

precursors to ozone. When NO<sub>x</sub> and VOC are directly emitted into the atmosphere, in the presence of moisture, heat, sunlight and wind ozone is formed (see **Tropospheric Ozone** on page 3). Carbon monoxide is the fifth criteria air pollutant. However, the pollutant is within acceptable levels within the District boundaries; therefore, the District has minimal regulatory restrictions on carbon monoxide.

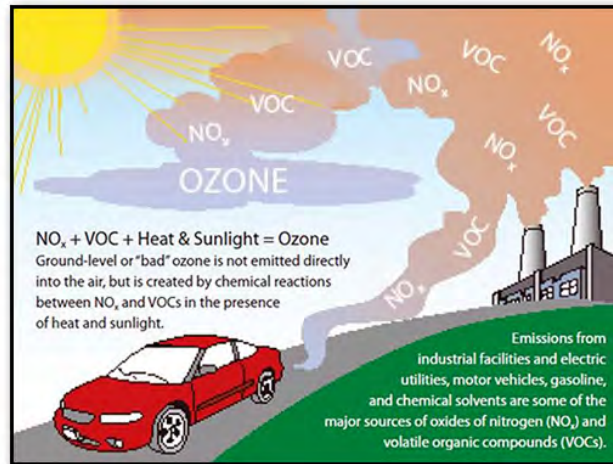
The District also assesses the potential health risk of toxic air contaminant (TACs) emissions and may require additional air pollution control equipment for these toxins. TACs are a myriad of different air pollutants that are considered "toxic" because the relative small amounts that can create significant harm to a person. The California Air Resources Board (ARB) has generated a list of over 134 TACs (number increases based on scientific information). These TACs can be something as well known as lead to something as unknown as 1, 1-Dichloroethylene. TAC can cause troubling health affects including: short term acute (burning of lungs), longer exposure chronic (debilitating health effects), and carcinogenic (possible cancer) effects.

Additionally, the US Environmental Protection Agency regulates from large industrial sources, Greenhouse Gases, or GHG(s) which are Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Sulfur Hexafluoride (SF<sub>6</sub>), Hydrofluorocarbons (HFCs), and Perfluorocarbons (PFCs).

## TROPOSPHERIC OZONE

### What is Tropospheric Ozone

Tropospheric ozone (ground-level ozone) is a colorless gas with a pungent, irritating odor, and a highly reactive harmful air pollutant that can damage living tissues and man-made materials upon contact. Normally, ozone is formed by a complex series of chemical reactions in the atmosphere, not directly emitted from a source. Volatile Organic Compounds (VOCs) and Nitrogen Oxides (NO<sub>x</sub>) are ozone precursor pollutants, that when emitted can form tropospheric ozone in the presence of light winds, high temperatures, and sunlight. Accordingly, peak ozone levels occur during the sunnier, warmer times of the year, typically April through October.



### Health Effects

When inhaled, ozone can irritate and inflame the lining of the lungs, much like sunburn damage on skin. People with respiratory problems are most vulnerable, but even healthy people that are active outdoors can be affected when ozone levels are high. Potential health impacts include aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses like pneumonia and bronchitis.

### Economic Impacts

Ozone can also hurt the economy by affecting crop yield and the durability of materials. Ozone can interfere with a plant's ability to produce and store food, compromising its growth and reproduction. Additionally, ozone chemically attacks natural rubber and certain synthetic polymers, textile fibers and dyes, and to a lesser extent paints. Rubber cracks and dyes fade after prolonged exposure to ozone.

## A FEW FIREWORKS SAFETY TIPS

On the 4th of July, fireworks have become an important part in celebrating our Nation's Birthday. The bigger the better. If you are grilling for your family, having a neighborhood potluck or going to town to see the BIG ONES, remember to keep it safe. Here are a few tips: Have an adult present; Only ignite fireworks outdoors in cleared areas away from houses, buildings, dry leaves, and flammable materials; Keep water handy for fires and emergencies; Wear eye protection; and After igniting fireworks, soak the fireworks in a bucket of water before putting them in the trash.

An interesting fact, the main ingredient in fireworks is gunpowder. Under the Federal Hazardous Substances Act, gunpowder is classified as a hazardous substance. Fireworks are dangerous. It is best to let the professionals do the BIG ONES. Allowing you to enjoy your holiday and making it a good memory.



**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.

**Air Pollution Control Officer**

Glen E. Stephens, P.E.

**Hearing Board**

Bill Deaver  
Herb Roraback  
Doris Lora  
Dr. Wallace Kleck  
James Bell



For news updates and other information, please visit the Eastern Kern APCD website at [www.kernair.org](http://www.kernair.org)

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