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We're on the Road to Somewhere

Whether that *somewhere* we are going is to work, school, the supermarket, or a friend's house, if we're driving there, in addition to other pollutants, we're putting particulate matter (airborne dust) into the air that we breathe. Pima Association of Governments stated that about 50% of particulate matter in our community comes from driving motor vehicles. This includes vehicle exhaust, brake and tire wear, paved road dust, and unpaved road dust.

Looking at the evidence behind vehicles on *UNpaved* roads, it is easy to see how dust becomes airborne. You may not see a rooster tail of dust from paved roads, but it is there, and there is plenty of it. Most of the 23,000,000 miles that Tucsonans drive every *day* are driven on *paved* roads. (That's the equivalent of driving around the earth's equator about 924 times daily.) Just for the sheer number of miles we drive on paved roads, more particulates are emitted on paved roads compared to unpaved roads.

Along with nitrogen oxides, volatile organic compounds, hydrocarbons, sulfur dioxide, and carbon monoxide, particulates spew out of the tailpipes of vehicles. Some people think that diesel engines are cleaner burning than unleaded fueled vehicles. They may be with some pollutants, but when it comes to fine particulate pollution, what comes out of diesel tailpipes is filthy and unhealthy.

Not only do vehicles emit particulates from their tailpipes, they also kick particulates up off of the roads. As most vehicle owners know, we have to change our brake pads and tires once in a while. The worn down tiny bits of brakes and tires are on the roads, as is plain old dirt that gets tracked on from muddy tires, or even metals and other materials that take a ride on the wind. As we keep driving over these bits of things, we make the particles smaller and smaller, and kick them up with each pass into the air that we breathe.

Effects on Health & Vistas

Breathing particulates is not good for us. It can cause a variety of health issues including difficulty breathing, diminished lung function, weakened immune system, increased severity of asthma and other lung diseases, heart attacks, strokes, and premature death. In addition, airborne particulates can also reduce visibility which can be hazardous while driving and interferes with scenic views.

What Can Be Done to Help?

There are programs across the nation working towards cleaner burning fuels and vehicles. Car manufacturers keep coming out with new models of cleaner vehicles such as gas-electric hybrids and flex-fueled vehicles that can use alternative fuels like Ethanol-85. Clean diesel programs include using fuels low in particulates such as biodiesel and ultra-low-sulfur-diesel. There are also electrification stations in a variety of locations (including Eloy, AZ) where big rigs can pull

in, and plug in for air conditioning and heating, and drivers can even plug in their laptops and TVs. This means that drivers don't have to idle their vehicles to maintain a comfortable cab environment.

There are also more personal alternatives to reduce emissions from vehicles. For those folks who are not in the market for a new clean-fueled vehicle, try carpooling, taking transit, walking, or biking instead of driving. Using an alternative mode of transportation just one day a week helps. You can also flex your schedule to avoid commutes during peak travel times, combine errands into one trip, avoid idling at schools and railroad tracks, keep your tires properly inflated, and maintain your vehicle properly.

Tucson recently passed the 1,000,000 mark in population size. The number of drivers in our community is increasing, as is the number of miles driven and time stuck in traffic. How many ways can you drive less?

Questions or Concerns?

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