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Air Quality in the Treasure Valley: The Benefits of Fuel-Efficient Vehicles

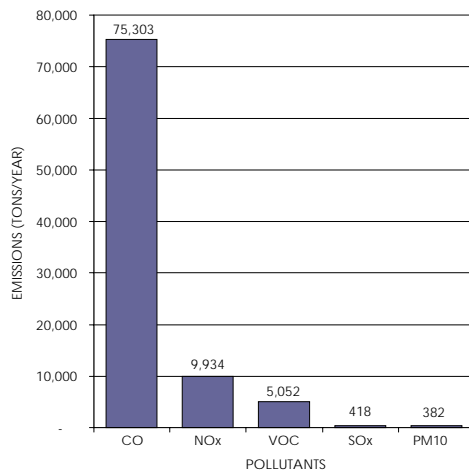
Did You Know . . .

- In the Treasure Valley, almost 8,800,000 vehicle miles are traveled each day?
- Vehicles account for almost 70% of annual carbon monoxide emissions in the Treasure Valley?
- In the Treasure Valley, the average person drives 25 miles per day and emits over 500 pounds of air pollutants and over 7,000 pounds of carbon dioxide per year?
- The population of the Treasure Valley is projected to grow by 60% by the year 2025, leading to more vehicles on the road and even more air pollution?

Air Pollution and Vehicles

Vehicles are the primary source of nitrogen oxides and carbon monoxide in the Treasure Valley. They also emit particulate matter, carbon dioxide, sulfur oxides, and volatile organic compounds.

Vehicle Emissions in the Treasure Valley



Vehicle emissions are created from the incomplete combustion of gasoline or diesel. Fuel-efficient cars use less gasoline and emit less pollution per mile.

Other factors such as emission controls, engine design, and vehicle maintenance may affect the emissions from your vehicle.

Pollutants emitted from vehicles can lead to poor visibility and health problems such as asthma and respiratory illness. Pollutants also can damage buildings and affect the quality of water resources.

What DEQ is Doing to Protect Air Quality in the Treasure Valley

- ✓ **Air Quality Monitoring:** DEQ monitors and reports current air quality conditions.
- ✓ **Community Partnerships:** DEQ works with other government agencies, local governments and citizens to find practical solutions.
- ✓ **Regulations and Enforcement:** DEQ permits and inspects industrial sources of air pollution.
- ✓ **Education and Outreach:** DEQ hosts public meetings and produces written materials and Web content.
- ✓ **Lead by Example:** DEQ encourages and supports carpooling among its employees and has purchased two hybrid vehicles for its motor fleet.

What Every Car Owner Can Do

No matter what kind of car you drive, you can minimize your impact on air quality.

- ☑ **Reduce mileage.** Combine trips, take alternative transportation or carpool with a friend.
- ☑ **Maintain your vehicle.** For optimum efficiency, change filters and oil and maintain tire pressure.
- ☑ **Test your vehicle for emissions.** A small adjustment can make a huge difference in how much pollution your car emits.
- ☑ **Consider fuel efficiency** when purchasing a new or used car.

The Hybrid Vehicle

One new technology being developed and sold in Idaho is the hybrid vehicle. Hybrids use both a conventional gas-powered engine and an electric motor to power the vehicle, resulting in better gas mileage and lower emissions. Currently, Toyota and Honda produce hybrid cars. Several other manufacturers have plans to introduce hybrid cars, SUVs and even mini-vans in the near future.

How does a hybrid work?

Hybrid vehicles utilize both an internal combustion engine and an electric motor.

Intelligent power electronics decide when to use the motor and engine and when to store electricity in advanced batteries for future use. The electric motor is used primarily for low-speed cruising or to provide extra power for acceleration or hill climbing.

When braking or coasting to a stop, the hybrid uses its electric motor as a generator to produce electricity, which is then stored in its battery pack.

Unlike all-electric vehicles, hybrid vehicles do not need to be plugged into an external source of electricity. The gasoline engine generates all the energy the hybrid vehicle needs.

Benefits of the Hybrid

- ✓ **Better gas mileage:** Because they do not rely solely on gasoline for their power, hybrids get more miles to the gallon. For example, the Toyota Prius gets 45 mpg on the highway and up to 53 mpg in the city. Why more in the city? Because when you stop and go slower, the car relies more on power from its electric system. The result is fewer trips to the gas pump!
- ✓ **Lower emissions:** With the assistance of the electric motor the gasoline engine can be smaller (and therefore less polluting). Hybrid vehicles can reduce air emissions of smog-forming pollutants by up to 90% and cut carbon dioxide emissions in half.
- ✓ **Tax incentives:** The IRS has determined that purchasers of a new hybrid vehicle are eligible for a “Clean-Fuel” vehicle tax deduction of up to \$2,000.

For More Information

Air Quality

The Idaho Department of Environmental Quality (DEQ) monitors and works to protect air quality statewide. Visit our Web site at www.deq.idaho.gov.

Fuel Economy

Compare emissions and fuel efficiency of vehicles of all makes and model years at www.fueleconomy.gov.

Alternative Transportation

Find out about bus service, vanpools and other travel incentives from the Ada County CommuterRide Program at www.commuterride.com.

Tax Benefits

Learn about the Internal Revenue Service’s tax incentives for hybrid vehicle purchases at www.irs.gov.

