

Air Quality Fact Sheet

What is Club Ride Commuter Services?

Club Ride Commuter Services is a free program of the Regional Transportation Commission of Southern Nevada (RTC). It is designed to help reduce traffic congestion, improve air quality and mobility, encourage the use of commute alternatives, and ultimately create a more sustainable community.

The Problem with Our Air

Across Southern Nevada, the U.S. Environmental Protection Agency (EPA) has classified 1,500 square miles as a nonattainment area for both carbon monoxide and particle pollution. This area includes the cities of Las Vegas, Henderson and North Las Vegas, and parts of unincorporated Clark County.

Nonattainment status means that pollution levels are likely to exceed federal and state limits on many days throughout the year. Poor air quality threatens economic prosperity, poses risks to human health and is harmful to the environment.

Air Quality Alerts

The Clark County Department of Air Quality and Environmental Management (DAQEM) issues an Air Quality Advisory if it anticipates that carbon monoxide, particle pollution (dust) or ozone may reach the *Unhealthy for Sensitive Groups* range or higher within the next 12 to 24 hours.

DAQEM issues an Air Quality Alert if and when one or more of the department's 16 monitoring stations detects elevated levels of a pollutant.

Particle Pollution

Particle pollution (also known as particulate matter or PM) comes from motor vehicles (especially older diesel vehicles), power plants and factories. Particle pollution is also created by wood burning, construction activity and agriculture.

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>...air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon



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Dust Pollution

Dust pollution, one part of particle pollution, is caused when tiny particles of dust or matter become airborne.

A significant source of dust in the Las Vegas Valley is from disturbed vacant land, unpaved roads, unpaved parking lots and dirt shoulders, and contrary to what many residents think, dust is not a natural phenomenon of desert living. Native desert soils are crusted by years of wind, sun and rain. It takes sustained winds of 25 mph to disturb this desert soil. The dust you raise taking that shortcut may not seem like a big deal, but when the soil's crust is broken and the wind blows, this dust becomes airborne, contributing to the Valley's dust or particle pollution.

Carbon Monoxide

Carbon monoxide is a colorless, odorless gas created from the burning of fossil fuels such as gasoline, oil or wood. Even though this pollutant can't be seen in smog, it is particularly harmful to our health – even fatal. ***Automobiles produce 85 percent of the Valley's carbon monoxide emissions,*** which is why it is important to encourage clean commuting to remove as many cars from the road as possible.

Ground-Level Ozone

Ozone does not come from tailpipes and smokestacks. Instead, it is a “secondary pollutant”—a byproduct of two other air pollutants, nitrogen oxides (NOx) and volatile organic compounds (VOCs or hydrocarbons).

- **Nitrogen Oxides (NOx)** come primarily from combustion of fuels in cars and trucks, coal-fired power plants, industrial boilers and gas-powered engines such as lawnmowers and leaf blowers. This occurs because nitrogen—which accounts for about 80 percent of air—also burns (oxidizes) when other fuels are burned.
- **Volatile Organic Compounds (VOCs)** are vapors that emanate from paint and print shops, gas stations, dry cleaners, lawn chemicals, and from combustion engines, such as those in cars and trucks, boats and diesel locomotives. Trees also emit VOCs.

Sunlight and warm temperatures “cook” NOx and VOCs, which react to form ozone. While ground-level ozone is a health and environmental concern, ozone in the stratosphere (six to 30 miles above Earth) is beneficial, as it shields Earth from harmful ultraviolet radiation.



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What are the Health Effects of Poor Air Quality?

Ground-level ozone, particle pollution and carbon monoxide are all harmful to human health, especially for children, the elderly, outdoor workers and those with respiratory conditions such as asthma. Particle pollution affects these people as well as those with heart disease. The primary target is the respiratory system, but it also targets the heart and the immune system. Ozone is a reactive and irritating chemical. When inhaled, it can irritate and inflame the airways that carry air from the mouth and nose to the lungs.

Some people are more sensitive to air pollution than others, but at very high levels, everyone is at some risk. Everyone should minimize exposure by limiting strenuous activities anytime the air is in the "unhealthy" and "very unhealthy" ranges of the Air Quality Index (AQI).

What Can I do to Protect My Health?

Become aware of your personal sensitivity to air pollution, and pay attention to local air quality forecasts, which are posted on DAQEM's Air Quality Forecast page (<http://redrock.co.clark.nv.us/forecast/>). On days when an Air Quality Advisory or Alert is issued, everyone should minimize exposure to outside air and reduce polluting activities as much as possible.

The Department of Air Quality and Environmental Management issues an Air Quality Advisory when levels are anticipated to reach the "unhealthy" range.

How Do My Driving Habits Affect Air Quality?

Automobiles produce 85 percent of the Valley's carbon monoxide emissions, in addition to other smog-forming pollutants, like NOx and VOCs. Driving through desert terrain and kicking up dust also contributes to particle pollution in the Valley. To ensure our air quality meets federal standards, it is important to limit the number of cars on the road and use commute alternatives, such as transit, carpooling and vanpooling.



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