

Air Quality And The Tucson Basin

WHAT'S GOING ON

During the past thirty years, growth and development of the desert southwest has changed many of its desirable aspects. One of the most noticeable is the quality of the air. Deserts have always been known for clean and healthy air, but increasingly poor visibility and obscured mountain vistas indicate a deteriorating air quality and possible biologic degradation.

The air in the Tucson area is particularly poor. Carbon monoxide (CO) levels are similar to those in Atlanta and Detroit, and are often in violation of EPA regulations. Particulate levels are worse than that of Los Angeles and are in frequent violation of federal standards. The ozone level is very close to the standard limits.

This highly polluted air spreads throughout the Tucson Basin, including Saguaro National Monument. By definition of the Clean Air Act, Saguaro National Monument is a Class I area, an area where additional pollution is not acceptable. Class I areas include most national parks and monuments, especially those with wilderness areas, such as the Saguaro Wilderness Area of Saguaro National Monument.

RESEARCH PROGRAMS

It is believed that high pollution levels may negatively affect the germination and growth rate of plants. Studies are currently underway at Saguaro National Monument to look for any effects of poor air quality on desert plants. Tissue samples are being taken from saguaro cacti and soil samples from all elevations are being analyzed. Cactus seeds will be planted in different soils to determine if pollution levels in soil affect germination rates. A similar study will attempt to determine if pollution increases the susceptibility of cacti to freezing temperatures. Daily data is collected at the Monument's air quality station. Monitors measure ozone and sulfur dioxide levels.

WHAT CAN BE DONE?

Although many potential sources have been identified, automobiles are responsible for most of Tucson's air pollution. They contribute 95% of CO, 80% of hydrocarbons and 70% of particulates. The use of public transit, car-pooling and non-polluting travel methods are becoming essential as Tucson grows. Keeping cars well tuned cuts down on emissions and increases gas mileage. Recycling and careful use of electricity can also help in reducing your personal contribution to pollution levels and in maintaining a more acceptable level of air quality.

