



## FACT SHEET

# Smog in San Diego County

### **Which monitoring station records the most exceedances of the clean air standard?**

The Alpine monitoring station consistently records the most exceedances of both the federal and state ozone standards. Measurements taken at Alpine reflect smog levels for all lower mountain slope area of the county, from Palomar Mountain to the Mexican border, at elevations between 1,500 and 3,000 feet.

### **Where does the pollution come from?**

As illustrated below, emissions from motor vehicles and industry are generated in the populated coastal plain and blown inland by the onshore breeze to the lower mountain slopes. These precursor emissions react in the area's abundant sunshine to create ozone, commonly called smog.

### **Why do the pollutants stop at the lower mountain slopes?**

A temperature inversion layer traps these pollutants against the slopes and prevents them from rising. A temperature inversion is formed when warm, dry air overlies the cool, moist marine air. The inversion layer hovers around 2,000 feet.

### **Is one time of day worse than another?**

Because photochemical reactions take time to transform precursor emissions into smog, peak ozone concentrations usually occur in the afternoon when sunshine is most intense.

### **Does Los Angeles affect San Diego's air quality?**

Yes, ozone and precursor emissions are transported to San Diego from the South Coast Air Basin (the metropolitan areas of Los Angeles, Orange, San Bernardino, and Riverside Counties) during relatively mild "Santa Ana" weather conditions. Winds blowing toward the southwest transport South Coast's polluted air out over the ocean, and the sea breeze brings it onshore into San Diego County.

When the transported smog is at ground level, the highest ozone concentrations are measured at coastal and near-coastal monitoring sites. When the blown-in smog cloud is elevated, coastal sites may be passed over, and the transported ozone is measured further inland and on the mountain slopes.

