FACT SHEET

Smog in San Diego County

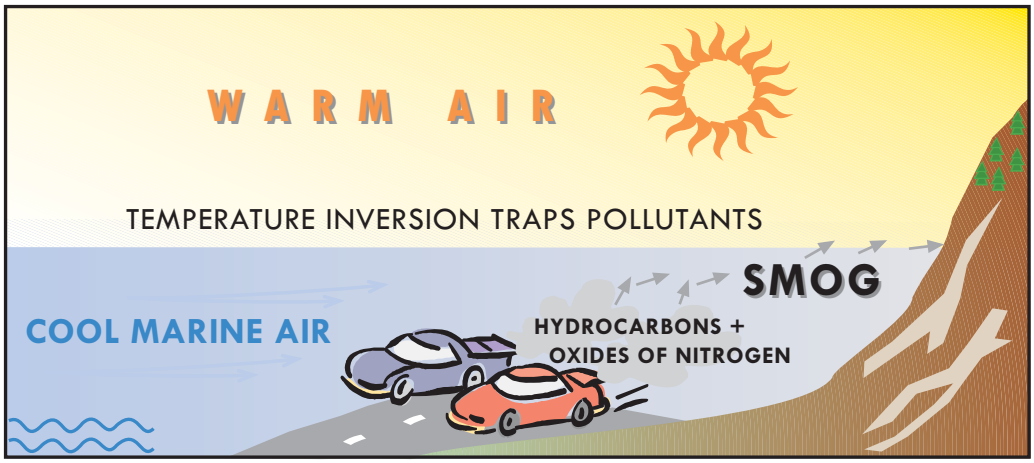
Which monitoring station records the most exceedances of the clean air standard?

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.

Why are smog levels usually higher at Alpine?

Alpine's smog levels in the west-facing lower mountain slopes are usually higher than the rest of the county because of how and where smog is created. Emissions from motor vehicles and industry are generated in the populated coastal plain and then 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.

When a temperature inversion occurs, it traps the pollutants against the mountain slopes and prevents them from rising. An inversion is formed when warm, dry inland air overlies the cool, moist marine air. The inversion layer hovers around 2,000 feet. The monitoring station at Alpine is also located at about 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.

APCD
AIR POLLUTION CONTROL DISTRICT
COUNTY OF SAN DIEGO

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