2. Environmental Factors

Two major quality of life indicators are climate and air quality. Climate is a key factor in determining what types of limitations or opportunities exist for agricultural production or recreational activities. Air quality is an indicator of the health of the environment as well as a factor in defining the aesthetic quality of an area. Poor air quality may indicate a large amount of industrial activity in an area. As in the case of other quality of life indicators, these provide information useful for making decisions concerning residential and business location.

Many state parks in mountainous El Dorado County offer a variety of recreational opportunities. Due to the mountainous geography and extreme seasonal weather changes, there are ever-changing recreational opportunities in El Dorado County. Below, the county's eight state parks and recreation areas are listed according to acreage.

State Parks and Recreation Areas

Area	Acres
D.L. Bliss State Park	2,148.93
Emerald Bay State Park	1,464.71
Auburn State Recreation Area	42,000
Folsom Lake State Recreation Area	19,549.67
Lake Valley State Recreation Area	155.39
Marshall Gold Discovery State Historic Park	286.59
Sugar Pine Point State Park	2,324.46
Washoe Meadows State Park	627.73

In this section:

Climate Data

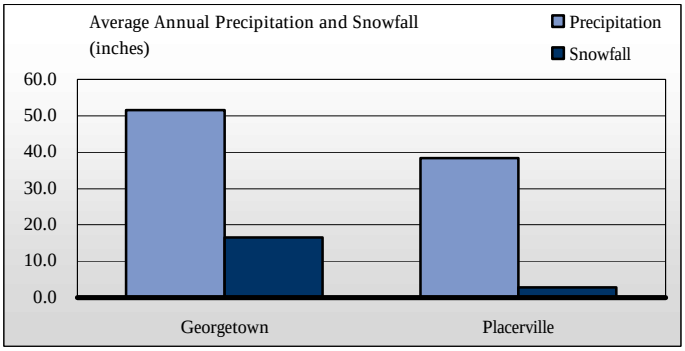
Overview

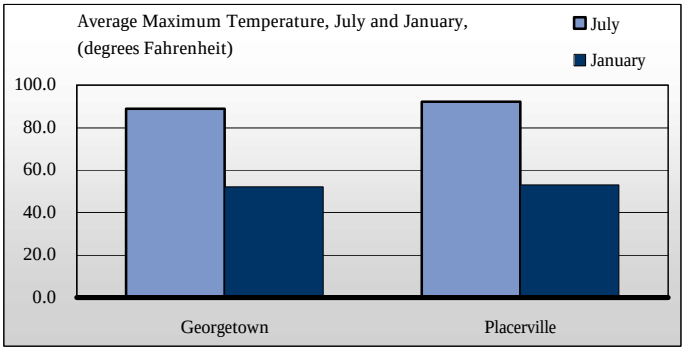
This section shows climate readings from selected weather stations in El Dorado County. Climate data is collected on an ongoing basis and is reported by the Western Regional Climate Center in December of each year unless otherwise noted. The data expresses an annual average calculated over the time indicated below.

It is important to know what types of weather a certain area may experience because of extremes of heat and cold, and severe storms may reduce the desirability of an area for tourists or retirees. These conditions may occur in a particular season and limit the attractiveness of an area at certain times of the year. This information can be useful for determining which particular businesses might be viable in a specific area.

El Dorado County

The two weather stations in El Dorado County are located in Georgetown and Placerville. Of these, Georgetown reports the most precipitation with an annual average of 51.7 inches. The following figure shows the average temperatures and precipitation rates in winter and summer for each weather station in the county.





NOTE: The data here reflects an average of monthly readings taken between the following years for each site:

Georgetown: 6/1/1948 to present.
Placerville: 1/1/1915 to present.

Climate Station Readings as of March 2005

	Georgetown	Placerville
Average July maximum temp. (deg.)	89.0	92.3
Average January maximum temp. (deg.)	52.2	53.2
Average July minimum temp. (deg.)	60.5	56.6
Average January minimum temp. (deg.)	34.0	32.3
Average July precipitation (in.)	0.1	0.1
Average January precipitation (in.)	10.1	7.0
Average annual precipitation (in.)	51.7	38.4
Average January snowfall (in.)	5.5	1.3
Average annual snowfall (in.)	16.6	2.8

Source: Western Regional Climate Center

Air Quality

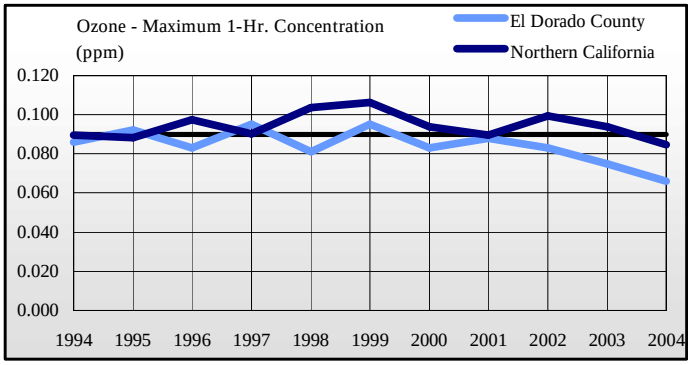
Overview

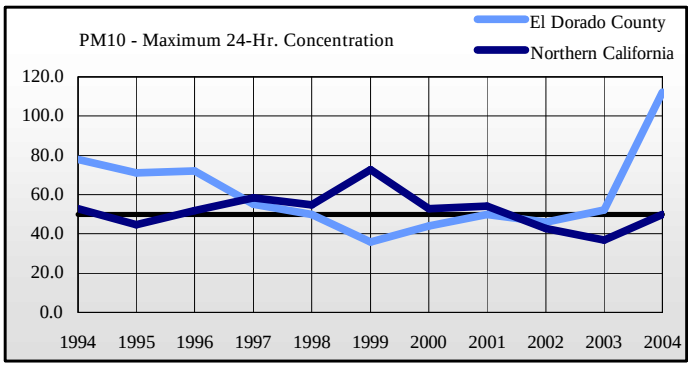
As industry, agricultural production, and traffic continue to increase in El Dorado County and across California, air quality becomes an important issue. Air quality affects all populations, especially the young, the elderly, and those with heart or lung problems. A county with high levels of pollutants will also see an increased need for health services. Air quality can be an important factor in determining where people are willing or able to live.

Air quality is a general term used to describe various aspects of the air that plants and human populations are exposed to in their daily lives. There are four main contaminants that decrease air quality: particulates (PM10), tropospheric ozone (O3), carbon monoxide (CO), and oxides of nitrogen (NOX). Air pollutants are emitted by both stationary and mobile sources. Stationary sources include factories, power plants, and agricultural burning (forest fires and field burning). Mobile sources of pollution include automobiles, trucks, buses, and various types of recreational vehicles. Mobile sources are primarily responsible for the decrease in air quality in Northern California.

Air quality standards are set at both state and federal levels. The allowable levels for a particular pollutant are established to protect human health, avoid damage to sensitive vegetation, and preserve aesthetic values. If a region is in violation of one or more standards for allowable levels of the above four pollutants, the state may limit the type of new industrial facilities that can be built in the area and place more restrictions on existing operations in the future.

The highest temperature ever recorded in the United States, 134 degrees F (57 degrees C), was measured in Death Valley on July 10, 1913, and was the second highest temperature ever recorded. The highest was 136 degrees F, in El Azizia, Libya on September 13, 1922.





PM10 - Particulate matter over 10 microns in diameter. Ground level concentrations are measured in micrograms per cubic meter. Examples of sources include cars and trucks (especially diesels), fireplaces, woodstoves, and windblown dust. Overexposure to PM10 can increase the likelihood of respiratory disease, cause lung damage, and even cause death in extreme cases.

CO - Carbon monoxide. Ground level concentrations are measured in parts per million. Sources include anything that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves. Overexposure to CO can cause chest pain in heart patients, headaches, nausea, reduced mental alertness, and death at very high CO levels.

NO2 - Nitrogen dioxide. Ground level concentrations are measured in parts per million. See carbon monoxide for sources. Overexposure to NO2 can cause lung damage.

O3 - Ozone. Concentrations are measured in parts per million. Sources include cars and trucks (especially diesels), industrial sources like chrome platers, neighborhood businesses, such as dry cleaners and service stations, and building materials and products. Overexposure to O3 can cause breathing difficulties and lung damage. Ozone is an invisible pollutant formed by chemical reactions involving nitrogen oxides, reactive hydrocarbons, and sunlight. It is a powerful respiratory irritant that can cause coughing, shortness of breath, headaches, fatigue, and lung damage, especially among children, the elderly, the ill, and people who exercise outdoors. Ozone also damages plants, including agricultural crops, and degrades manufactured materials such as rubber and paint.

According to statistics from the U. S. Environmental Protection Agency, between 1980 and 1995 the percentage of children nationwide with asthma doubled, rising from 3.6 percent in 1980 to 7.5 percent in 1995. In 2001, the EPA found that 8.7 percent (6.3 million) of all children had asthma.

The percentage of children with asthma differs by race/ethnicity and family income. In 1997-2000, more than 8 percent of black, non-Hispanic children living in families with incomes below the poverty level had an asthma attack in the previous twelve months. Approximately 6 percent of white, non-Hispanic children and 5 percent of Hispanic children living in families with incomes below the poverty level had an asthma attack in the previous twelve months. More than 6 percent of children living in families with incomes below the poverty level had an asthma attack in the previous twelve months. About 5 percent of children living in families with incomes at the poverty level and higher had an asthma attack in the previous twelve months.

Emergency room visits for asthma and other respiratory causes were 369 per 10,000 children in 1992, and 379 per 10,000 children in 1999. Hospital admissions for asthma and other respiratory causes were 55 per 10,000 children in 1980 and 66 per 10,000 children in 1999.

El Dorado County

West El Dorado County lies within the Mountain Counties Air Basin, along with seven other counties (Sierra, Nevada, Amador, Calaveras, Tuolumne, and Mariposa), as well as Central Placer County.

While logging and mining industries contributed to air pollution in the past, tourism and recreational activities have replaced those industries in recent years, resulting in lower pollution levels throughout the basin. Ozone levels are exceeded in much of the air basin, due to vehicle traffic to and from the Sacramento Valley, as well as wind-blown particles during the day. The county does violate state standards for particulate matter (PM10) as well as ozone levels, and is unclassified for reaching levels of carbon monoxide (CO) as of 2004.

In 2004, the county air quality was above the state standard sixteen days out of the year, with no days above the federal standard. This was an increase of fifteen days from the previous year. The only pollutant that was too abundant by state standards was particulate matter, with no other pollutant reaching that level all year. See the figure below for air quality by pollutant in El Dorado County in 2004.

NOTE: Ozone and PM10 measurements taken in South Lake Tahoe at Sandy Way. CO measurements taken in South Lake Tahoe at 3377 Tahoe Blvd and Sandy Way.

County Air Quality

Pollutant (measurement)	Measure	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ozone (ppm)	Max. 1-Hr. Concentration	0.086	0.092	0.083	0.095	0.081	0.095	0.083	0.088	0.083	0.075	0.066
Ozone (ppm)	Max. 8-Hr. Concentration	0.079	0.089	0.073	0.071	0.075	0.073	0.072	0.077	0.079	0.066	0.058
Ozone (ppm)	Days Above State Std.	0	0	0	1	0	1	0	0	0	0	0
Ozone (ppm)	Days Above Nat'l 1-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0
Ozone (ppm)	Days Above Nat'l 8-Hr. Std.	0	1	0	0	0	0	0	0	0	0	0
PM_{10} (ug/m^3)	Max. 24-Hr. Concentration	78.0	71.0	72.0	55.0	50.0	36.0	44.0	50.0	46.0	52.0	112
PM_{10} (ug/m^3)	Max. Annual Geometric Mean	27.1	22.5	23.4	21.6	23.4	19.9	20.4	19.8	19.9	17.6	44.2
PM_{10} (ug/m^3)	Days Above State 24-Hr. Std.	7	3	4	2	0	0	0	18	0	1	16
PM_{10} (ug/m^3)	Days Above Nat'l 24-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0
CO (ppm)	Max. 8-Hr. Concentration	2.60	2.64	2.43	2.43	2.31	2.44	2.84	1.88	3.04	1.51	1.18
CO (ppm)	Days Above State 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0
CO (ppm)	Days Above Nat'l 8-Hr. Std.	0	0	0	0	0	0	0	0	0	0	0
NO_2 (ppm)	Max. 1-Hr. Concentration	0.057	0.059	0.061	0.051	0.052	0.060	0.052	0.054	0.055	0.052	0.055
NO_2 (ppm)	Max. Annual Average	0.012	0.011	0.011	0.011	0.010	0.011	0.011	0.011	0.012	0.010	0.000

Source: California Air Resources Board