

## Breathe deep: Valley air quality has best July in two decades

By Mark Grossi

Fresno Bee, Wednesday, Aug 5, 2015

July hasn't been so nice since 1995 in the San Joaquin Valley. We're talking about dirty air, and the lack of it last month.

For 21 days last month, the air did not exceed the eight-hour federal health standard for ozone — a corrosive gas that attacks the lungs, skin and eyes. That's three weeks of healthy air in the Valley during a month when the average is just five or six good days.

Nobody else in the nation gets dirty air for as many days as the Valley gets it, except for the South Coast Air Basin in Southern California. But this year, people could let their children play outside in the afternoon most of the month. Why?

Weather and air quality are linked, federal scientists say. Meteorologists point to unsettled conditions that cause air to mix throughout the atmosphere, which breaks up ozone. The Valley had thunderstorms and steady breezes in July. Fresno got more than a third of an inch of rain in one storm.

Cloudy days make a difference, too, and the Valley had some last month. Sunshine and heat are needed to create ozone.

The unsettled weather also affected Southern California, which had only 15 bad days. The South Coast Air Basin commonly has 25 or more bad July days.

But it's a mistake to attribute the cleaner air last month to weather, says the head of the San Joaquin Valley Air Pollution Control District.

District executive director Seyed Sadredin says the weather didn't always cooperate, especially during short runs of triple-digit heat. There were also 20 wildfires in the region. Wildfires produce ozone-making gases called nitrogen oxides.

Instead of weather, Sadredin credits the nice July to some of the toughest air regulations in the nation, along with investments in clean-air technology by businesses and residents.

The last time the Valley had so many days of breathable air in July was 1995. There were 23 healthy days and only eight bad days that year. The cleanest July over the last 35 years was in 1983. It had 25 healthy-air days and only six bad ones.

What does it mean if this kind of air cleanup becomes a permanent feature here?

If the Valley meets even an older federal ozone standard, health-related and other costs would drop by nearly \$90 million a year, according to a study done several years ago by researchers at California State University, Fullerton.

But ozone is a persistent villain in the Valley. When bad-air episodes happen, ozone levels tend to simmer right about the health threshold for hours at a time, meaning people get lengthy exposures outdoors.

Ozone forms when nitrogen oxides (think of vehicles, industrial boilers or fires) combine with volatile organic compounds (vapors from fuels, paints or dairies). In the Valley, the gases can be trapped for days when the weather becomes nearly windless and stagnant.

How does it damage lungs?

Ozone chemically burns the lungs. As the American Lung Association puts it, "think of it as a sunburn on the lungs." The stress and inflammation can trigger asthma and other lung ailments.

The people most susceptible are children, the elderly and those who already suffer lung problems. At its worst, ozone is blamed for premature deaths in the Valley.