Schools spare pupils from air

By TIM BRAGG, Californian staff writer
The Bakersfield Californian
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Felix Adamo / The Californian First-grade pupils at Almondale Elementary dance to the hokey-pokey as they have their P.E. classes inside the classroom due to poor air quality. From left are teacher Patricia Hashim, Madison Smith, Karina Miranda, Sam Walker, Hannah Nolan and Taylor Becker.

The mountains were not visible Monday from the campus of Almondale Elementary School in northwest Bakersfield.

Not many of the kids were visible either.

On days when the skies are brownish-gray and the air is unhealthy, the pupils at Almondale stay inside for more of the day.

Physical education classes are held inside and the library is opened up so pupils don't have to go outside for recess if the air quality is bad enough that officials have declared a "Spare the Air Day."

Some schools are taking more stringent steps to protect their pupils from the bad air that plagues the San Joaquin Valley during certain times of the year.

Instead of limiting activity just on days when the San Joaquin Valley Air Pollution Control District issues a mandatory health warning, some schools and districts limit physical activity on other days when the smog is less severe.

Monday was one of those days at Almondale Elementary School.

"We don't want to make it a free day for them," said Almondale Principal John Mendiburu. "We do activities indoors to keep them moving, so they are not just sitting around."

In Patricia Hashim's first-grade class, pupils did the hokeypokey and other activities inside instead of outside in their physical education classes.

"We talk about how it's too hot outside for them to play," Hashim said. "They understand that it's not good for them to play outside, but they don't really understand exactly why the air is bad yet."

At least one pupil was glad to be inside Monday.

"Because it's fun," said first-grader Cassidy Fraley, when asked what she liked about being inside.

The temperature was only about 85 degrees on Monday, but Mendiburo said the air quality was poor enough for the school to decide to curtail physical activity.

Rosedale Union School District Superintendent Jamie Henderson said schools in the district use air quality information to determine how much outside activity children will get.

On days with only a moderate amount of pollution, Henderson said P.E. and recess will only be curtailed slightly, such as having the children avoid running.

But more serious pollution leads to more activity reduction.

Air pollution was at a moderate level Monday, bad enough to be a problem for children and adults sensitive to respiratory problems.

"When I was little, we just went out and played on days like these," said Mendiburu, who grew up in Bakersfield.

But attitudes on bad air are changing, said Kelly Malay, a spokeswoman for the air pollution control district.

More and more schools are signing up to receive air quality information from the district.

"Our air quality has actually improved a little over the last 10 or 15 years, but it's not enough," Malay said. "I think it's getting more attention now, so people take more precautions."

The worst airborne pollutants for children are ozone and nitrogen oxides, said Dr. Patrick Leung, a local allergist.

"In most cases children will be fine if they play in the morning," Leung said. "It's the afternoon when the levels of these substances are at their highest. Children don't need to stay in all day long."

Leung said a study by researchers in Southern California shows that asthma is more common in children living in areas with air pollution.

But he said air pollution alone is not the cause of asthma.

Malay said ozone forms when smog undergoes a chemical change caused by heat and light.

Nitrogen oxides are caused by human uses of substances containing volatile organic compounds.

But things like ozone and nitrogen oxides are far from the minds of the fourth-graders in Penny Shafer's class Monday.

"I just want to go outside and play, said 9-year-old Cory Gannon.

Valley racking up smog violations

By MATT WEISER, Californian staff writer
The Bakersfield Californian, September 30, 2003, 11:01:00 PM

It's been a long, hot summer. And a smoggy one, too.

Through the end of September on Tuesday, the southern region of the San Joaquin Valley (Kern and Tulare counties) has violated a key federal smog standard 106 times. That's more often than seven out of the last 10 years, with three months still to go in the year.

The standard measures ozone pollution over an eight-hour period and is considered a critical health indicator.

Ozone, a key ingredient in smog, is formed when vehicle and factory emissions react in the presence of heat and sunlight. Because the valley has had more heat and sunlight than usual this year, it also has had more smog.

"This has been a worse year than others," said Evan Shipp, chief meteorologist at the San Joaquin Valley Air Pollution Control District. "For the last month or so, we've really been locked into a high-pressure pattern where it's really conducive to ozone formation. That doesn't happen every year."

Valleywide, the federal standard has been violated 111 times so far this year, again exceeding seven of the last 10 years.

Shipp said ozone violations are rarely a problem after Sept. 20 every year, when cooler fall weather prevails. But this year, Kern County's longest run of "Spare the Air" days began on that date and lasted for 10 straight days -- until Monday -- as temperatures remained locked in the 90s, with several days over 100.

September's average temperatures were 4.4 degrees above normal, with 23 days during the month recording temperatures above 90 degrees. And you can pretty much say the same thing about June, July and August.

"Usually, ozone is a product of having a large amount of sunshine and heat. So it wouldn't be surprising to have a little bit worse air quality this summer," said Mark Burger, a National Weather Service meteorologist based in Hanford. "We just had a very strong and stubborn ridge of high pressure aloft."

In Bakersfield, June averaged 2.5 degrees above normal, with 20 days over 90 degrees, Burger said. July temperatures were 4.3 degrees above normal on average, and every day in July was above 90 degrees. August was about normal, with 27 days peaking above 90 degrees.

Much of the hottest weather came in stretches, leading to several periods of Spare the Air notices that lasted for three or four days. The air district issues these voluntary advisories whenever the air quality index exceeds 150, the level considered unhealthy for everyone.

The valley's geography and weather aggravate these conditions. Surrounding mountains hold in pollution, and the customary lack of strong winds provides no way to push out pollution every day. As a result, smog gradually gets worse on a day-to-day basis when a hot spell persists and pollution builds up.

Air pollution officials have also exhausted many options for significant pollution reductions. Most factories and power plants are heavily regulated. Automobiles and fuels get a little cleaner every year, yet rapid development in the valley is bringing more cars into the valley and forcing people to drive farther.

All this, Shipp said, is why cleaning up the valley's air is so challenging, and why even small efforts to reduce pollution are so important.

"We just happen to have the right climate and the right type of (emissions) to really form ozone readily," he said, "and it's pretty resistant to change."

Spare the Air tips

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Spare The Air is a voluntary, program to reduce summertime air pollution, specifically ground-level ozone, or smog.

On these days, the San Joaquin Valley Air Pollution Control District urges people to limit activity that may contribute to air pollution, such as reducing the amount of driving a person does during the day.

Such days are declared when the Air Quality Index is forecast to be above 150.

An index score above 150 is considered unhealthy, meaning everyone should limit outdoor activity; a score between 150 and 101 is considered unhealthy for those sensitive to bad air; scores of 51 to 100 are considered moderate while anything under 50 is considered good with no limitations.

The San Joaquin Valley Air Pollution Control District recommends parents take the following precautions on days when air quality is bad.

* During the summer, the worst air quality is in the afternoon. Check air quality reports.

* If the forecast is for unhealthy levels of air pollution, the best way to protect children is to have them reduce their exertion.

* Children don't have to stay inside, but the inside activities generally involve a lower amount of physical exertion.

Smog alerts will be bigger

By JOHN HEILPRIN and MELANIE TURNER, Modesto Bee, October 1, 2003

Breathers note: The Environmental Protection Agency today begins issuing daily alerts year-round for smog and soot pollution in about 150 places nationwide prone to those problems.

Modesto and Stockton are among eight cities in California to begin getting the daily alerts, EPA spokeswoman Lisa Fasano said.

That means people will be able to get up-to-date pollution forecasts on the EPA Web site.

The San Joaquin Valley Air Pollution Control District already provides the same service, said Josette Merced Bello, spokeswoman for the valley air district.

"Most of California has already been doing that for quite some time," Merced Bello said. For the rest of the country, however, the alerts are new.

The district provides daily forecasts for soot and smog, alerting the local media and posting the information on its Web site.

The EPA hopes its expanded "Air Quality Index," until now used solely for summertime smog, becomes as popular and widely used as the utterances of the National Weather Service.

The expanded forecasts for smog and soot, or particle pollution, will help millions of people protect their health -- especially those with heart or lung disease, older adults and children, acting EPA Administrator Marianne Horinko said.

They will be posted daily on an EPA Web site with color-coded forecasts for about 150 cities, counties and other monitoring locations, EPA officials said. The agency hopes to expand the service to double the locations within two years.

"We're finally able, after a whole lot of work, to add air particle pollution," said Jeff Holmstead, the EPA's assistant administrator in charge of air quality. "It will be year-round for both, but we don't expect there will be problems in winter with ozone."

That's because smog, or ozone pollution, forms in warm weather -- heat and sunlight are needed to cook the pollutants.

The valley air district has provided year-round forecasting for all pollutants except so-called particulate matter 2.5, tiny pollutants that are 1/28th the diameter of a single strand of human hair, since 1992. The district added the tinier, more dangerous version of the pollutant to its forecasts in November.

Merced Bello said the alerts are intended to help areas of the country that don't have air districts to provide that information.

Said Fasano: "It's making it available to more people."

Smog, soot alerts not the same

Now, about 300 places get smog alerts, but those won't automatically be the ones that get the soot alerts.

"Fine particles and ozone pollution tend to be in the same areas, but that's not always the case, so some areas might not need to worry about ozone," Holmstead said.

The air quality index has grown, Holmstead said, from summer-only smog alerts for about 35 cities in 1998.

"We just haven't had the science to be able to do this until now," he said. "We're very excited."

Breakthroughs in providing better and quicker information have come through new computer modeling systems and improved air monitoring machines using updated filters, EPA officials said.

"Traditionally, you had to wait a day or two to get results," said John Bachmann, an EPA senior science adviser. "It's just taken time to develop the technology."

Bachmann said the new systems will provide "close to real-time measurements" of smog and soot through the Internet.

Smog forms at ground level through a chemical reaction between nitrogen oxides and volatile organic compounds in heat and sunlight. Some of the major sources are motor vehicle exhaust, industrial plants, gas vapors and chemical solvents.

Soot forms when microscopic solids and liquid droplets mix in the air. Sources include diesel-powered vehicles, coal-burning power plants and forest fires. Particles can penetrate people's bodies, affecting the lungs and heart.

On the Net:

EPA AirNow: www.epa.gov/airnow.

EPA starting daily air quality alerts for soot and smog

JOHN HEILPRIN, Associated Press Writer, published in the San Francisco Chronicle on October 1, 2003

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