# Scientist, official raise stink on cows

**Researcher disagrees with pollution estimate.**

By Mark Grossi / The Fresno Bee

Tuesday, August 30, 2005

Valley air officials and the dairy industry have called a truce to work on controlling smog-making gas from cows, but the subject of bovine air pollution is still plenty sensitive.

A University of California at Davis researcher and the San Joaquin Valley Air Pollution Control District's top official Monday clashed publicly over the issue.

The scientist, Frank Mitloehner, told two area congressmen he does not support the district's current pollution estimate, which was announced early this month. The estimate makes the Valley's 2.5 million dairy animals the No. 1 source of one smog-making gas, called volatile organic compounds.

In other words, according to the estimate, cows and their waste make more of this smog-making gas than passenger cars in one of the nation's most polluted air basins.

District Executive Director David Crow defended the estimate: "I have confidence in this number. It is not etched in stone, but I believe it is a reflection of the best science."

Mitloehner and Crow were part of a dairy-dominated panel that Monday discussed the subject in front of a crowd filled mostly with dairy representatives. The town hall meeting was called by Reps. Jim Costa, D-Fresno, and Devin Nunes, R-Visalia.

The meeting showcased the new peace between the air district and the dairy industry, which had sued the district last year over regulation of dairies. Crow this month approached the industry after the announcement of the estimate, which had initially galled dairy representatives.

"We're here because we had a blunt conversation with Mr. Crow," said Ken Abernathy of the California Dairy Campaign. "We believe we have a basis for conversation."

The town hall meeting was like a workshop to help dairy owners and representatives understand the task before them.

The district must come up with controls to reduce cow pollution by next June. Most experts consider the time frame tight because dairy pollution emissions have not been fully researched.

Crow said the dairy emission estimate was open for change as research continues. He also said the district must learn more about the many kinds of dairies in the Valley before coming up with a list of ways to control pollution on them.

One scientist, Charles Krauter of California State University, Fresno, suggested there is evidence that a few simple changes would help. He compared his research at two Valley dairies, noting he found lower emissions coming from one dairy.

"It was more intensely managed," Krauter said. "There were a series of lagoons, and the manure was scraped more often. Simple changes like this might make a difference."

The conversation later turned to the district's estimate, 19.3 pounds of pollution per cow per year. It represented about a 50% increase over the former estimate, which hadn't been updated since 1938.

Most of the newer, higher estimate is linked to a controversial emission called volatile fatty acids. Mitloehner said the controversy can be laid to rest with three or four months of research to provide solid evidence of whether the number is too high.

He said the research on the current number was not based on strong science. When Nunes pressed Mitloehner for his position on the district's 19.3-pound estimate, the researcher said he preferred to talk about moving the conversation forward.

"But when you ask me directly if I can stand behind the current emission factor, I must say no."

# San Joaquin Valley battles state's worst air

**Community works to make the mountains visible again and let everyone breathe easier**

Greg Lucas, Sacramento Bureau

S.F. Chronicle, Tuesday, August 30, 2005

Sacramento -- At Mayfair Elementary in the Fresno Unified School District, color- coded flags tell asthma-suffering sixth-grader Robert Hinojoza whether that day's air pollution is low enough to play hard during recess or just have a walk around and chit-chat with friends.

"If it's a red day, I shouldn't be running around as much. If it's an orange day, I should probably be in the shade," said Hinojoza, 11.

Of Fresno Unified's 79,000 students, about 30 percent have some form of asthma. This fall, after a successful pilot program, flags will fly at all of the district's 95 schools. Modesto City Schools will fly similar flags over its 33 campuses starting Sept. 1. A handful of Stockton schools are starting to do the same.

The flags are an acknowledgement of the San Joaquin Valley's high asthma rate -- 12 percent of school-age children throughout the region have it -- and an example of an expanding activism as the valley fights to lose the unhealthy distinction of breathing the worst air in California.

Farmers, parishioners, developers, civic groups, coalitions and utilities are working to reduce the dust and emissions trapped by the mountains surrounding the valley, which stretches from San Joaquin County south through Fresno to the Tehachapi Mountains.

"Everybody wants to fix it at this point," said Carol Whiteside, president of the Great Valley Center, a Modesto-based think tank. "Most people believe it will be a series of many small actions and improvements by many people which, together, will bring about long-term change."

That will be challenging not just because of the valley's bowl-like geography but also because of its rapid rate of population growth.

The state Department of Finance expects the valley's population to increase 104 percent between 2000 and 2040, about twice the growth rate projected for Mexico during the same period.

Valley residents are exposed to unhealthy levels of ozone more often than people living in the Los Angeles Basin, historically home to some of the nation's poorest air. From 1999 through 2004, the valley failed to meet the federal standard for healthy air 38 percent of the time.

Thousands of diesel trucks -- many from Mexico, where emission standards are lower -- steadily stream up and down the valley's two major highways, Interstate 5 and Highway 99.

Farm operations are responsible for 20 to 25 percent of the valley's emissions, according to the state air board. Agricultural burning, dust from harvesting and planting, as well as gases from waste lagoons at dairies all contribute to the bad air.

Valley residents are mobilizing in a way they haven't in the past.

A 2004 poll by the Public Policy Institute of California found that 47 percent of valley residents viewed air pollution as a "big problem" -- up from 28 percent in 2000.

"Five years ago, there was nothing. No Central Valley Air Quality Coalition. We didn't have a program," said Mark Stout, an air quality consultant for Fresno Metro Ministries.

The coalition, which is made up of 50 groups, lobbies in Sacramento as well as in the valley. Other groups have formed, such as Fresno's Operation Clean Air and Clean Air Now.

The six-county Catholic Diocese of Stockton sponsors meetings to educate its parishioners about the causes of the pollution. Participants learn how to lobby elected officials and to adopt personal strategies like limiting outdoor activities to mornings in ozone-heavy summer and to afternoons in winter because air quality improves as the air becomes drier.

One of the biggest pushes in the fight against poor air quality has been on the farm. More than 80 percent of California's $5.4 billion dairy industry is centered in the valley. Tulare, for example, is the state's biggest milk producing county and home to 433,000 cows.

But until last year, farms and dairies were not subject to clean air requirements.

"Agriculture was exempted, but they were part of the problem. Lighting up the skies burning trimming and waste," said Sen. Dean Florez, D-Shafter, author of legislation ending the exemption. "Hopefully, now we'll get to a solution that's more result-oriented."

Because of Florez's legislation, larger farms must create plans to reduce dust or, as the San Joaquin Valley Air Pollution Control District calls it, PM, for particulate matter. Agricultural burning is being phased out. Particulates can lead to cardiac disease and lung ailments.

The district says the valley is coming closer to meeting the federal standards for particulate matter but worries that increased traffic from growth may erase those gains.

An incentive program by the local air district subsidizes placing new cleaner-burning engines in tractors, harvesters and other off-road farm vehicles.

And earlier this month, Pacific Gas and Electric announced it will spend $27.5 million to lure farmers to switch from older diesel pumps -- responsible for 17 percent of the particulate matter in 2003 -- to electric pumps. The company is offering lower rates and paying the lion's share of the cost of extending lines to the new pumps. The utility has already received 480 applications, the first 82 from Campos Brothers Farms in Caruthers.

The 13,000-acre farm, which spreads from Fresno County to Madera County, saw converting to electricity as a more cost-effective option in part because of high diesel prices.

"This makes it feasible to switch since we won't have to pay for all this out of pocket right now. Of course we're also trying to do our part to reduce emissions for air pollution reasons," said Todd Ayerza, purchasing manager for the farm, which mainly grows almonds.

Last year, the farm bought a $250,000 chipper to dispose of annual prunings. Previously, prunings were hauled to the end of the field and burned.

The valley air district also is set to levy a mitigation fee, the first of its kind in the state, on developers who don't design air-friendly projects.

In Stockton, the developer Grupe Co. is designing a 7,000-unit project that encourages walking and the use of golf carts or other electric vehicles. A trail system will offer a shorter trip to the supermarket when using the carts. There will be preferential parking for the carts and chargers throughout the development.

"It's a combination of a desire to create projects that have less impact on the environment as well as homeowners, we're finding, for short trips, actually prefer to use the electric vehicle because it's easier to park," said Kevin Huber, Grupe's CEO.

The air quality district has also used some of its incentive money to promote the use of newer technologies like "green goats." The green goats are hybrid diesel electric locomotives that operate in rail yards to sort out rail cars from inbound trains and assemble outgoing trains.

Traditionally, the task was shouldered by the railroad's oldest, dirtiest locomotives -- ones no longer capable of chugging cross-country.

The district helped purchase six of the hybrids, which reduce emissions by more than 80 percent and burn as much as 60 percent less diesel.

Despite the increased commitment, the valley is not unified on what strategies work best to improve air quality.

In the hope the air district will create tougher smog regulations, the valley's clean air coalition and the Sierra Club back a bill, pending in the Assembly, to add two public members -- one with a medical background and one environmentalist -- to the air district's board.

The board opposes the effort, saying more would be accomplished if it were given authority over vehicle emissions now under state purview.

Either way, the valley's population growth and increasing traffic will pose challenges for those who care about its air quality.

"I still think we're winning, slow but sure," said Kevin Hamilton, a Fresno doctor and respiratory therapist, who sued the air district for not meeting federal smog standards. "Fifteen years from now, I'll see the mountains. I have faith."

**Bowl-like valley traps poor-quality air**

California's 240-mile-long San Joaquin Valley has some of the smoggiest air in the nation. Strong winds and sharply ascending mountains to the east trap air pollution in the valley.

Mountains limit air flow into and out of the valley. Most air entering the valley travels through the Bay Area, where it picks up pollutants.

Cool winds from the mountains cause air to move in a circular pattern, or eddy, preventing pollutants from dissipating outward.

Layers of warmer air above the cool air also hinder pollutants that would otherwise disperse upward.

During the summer, winds flow in a south southeasterly direction, allowing some air to escape.

The air quality flag program

This fall, flags will fly at schools in the valley to inform at-risk people about the quality of the day's air.

GREEN: good

No limitations.

YELLOW: moderate

Extremely sensitive children and adults, especially those with respiriatory diseases such as asthma, should consider limiting outdoor exertion.

ORANGE: Unhealthy - Sensitive groups

Sensitive children and adults, especially those with respiratory diseases such as asthma, should limit prolonged outdoor exertion.

RED: Unhealthy

Sensitive children and adults should avoid outdoor exertion, and everyone else should limit prolonged outdoor exertion during peak ozone periods.

Sources: California Air Resources Board; AP; USGS; ESRI

## Deal between district, dairy interests to ward off suit

**Informal agreement calls to delay costly controls in move some are skeptical of**

By Sarah Ruby, staff writer
Bakersfield Californian, Tuesday, Aug. 30, 2005

A back-room deal between valley air police and dairy interests is raising eyebrows.

"I don't know what was said, or what the handshake is all about," said Brent Newell, attorney for the Center on Race, Poverty and the Environment, which has been closely following dairy regulation. "It shows the industry retreating from where it doesn't have an advantage -- the legal system."

The air district will put off costly pollution controls until next year, according to a verbal agreement with two dairy industry groups. By that time, dairymen hope a few fast-tracked dairy studies will have settled the cow pollution controversy.

Air and dairy officials say all they've done is agree to put the past behind them, and to work together to fund more studies on milk cows and air pollution.

Hundreds of millions of dollars in dairy industry profits are at stake. In the next year, the San Joaquin Valley Air Pollution Control District will decide which pricey air pollution-cutting technologies dairies must install, and which dairies will have to install them.

The dairy industry suffered a setback earlier this month, when the air district announced individual cows produce more of one smog-forming ingredient than cars. That means more dairies will likely be regulated, and dairymen threatened to sue.

But all that has changed. The dairy industry now supports the district's regulatory efforts. It will even fund new research.

In Newell's view, the change in tone is strategic.

"Where (the dairy industry) does have an advantage is behind the scenes in administrative lobbying," Newell said.

So far, the air district has held its ground against the powerful dairy lobby, he said. Dairymen might whittle at that resolve over time, he said.

The district's top official, David Crow, declined to be interviewed for this story.

The agreement between Crow and industry groups isn't binding; it's an act of good faith, said Jaime Holt, spokeswoman for the district. It's starting to look at possible controls on dairy operations, and will have them firmly established by next summer, she said.

"The intention of (the agreement) is for the divisiveness to stop and for collaboration to begin," Holt said.

If cows are found to pollute less, fewer dairies will be forced to install pollution-cutting technology. If they pollute more, more dairies will be regulated.

The most feared technologies are those that deal with manure storage lagoons, which can cost millions to install, depending on the size of the dairy.

Crow presented the agreement to the air district board earlier this month. He was joined by representatives from two dairy industry groups, the Community Alliance for Responsible Environmental Stewardship, based in Sacramento, and the California Dairy Campaign, based in Turlock.

"I can't imagine someone being concerned about closed-door meetings about those things," said Richard Cotta, chairman of the Community Alliance for Responsible Environmental Stewardship. New scientific research "is about as open-book a process as you can possibly get."

That research is being coordinated by state and district officials, according to James Sweet, air quality project planner for the district. The studies are meant to quantify a category of pollutants that make up 80 percent of the district's per-cow emission calculation. Chemicals include vinegar, alcohols and other compounds thought to escape cows' bellies and fermenting manure piles, and eventually form smog.

The studies will also likely measure emissions from dairy operations that haven't yet been accounted for.

"We want (the studies) to be aggressive," Sweet said. "We want them to be as fast as possible."

With 2.5 million dairy cows and some of the worst ozone pollution in the country, the San Joaquin Valley is the epicenter of the dairy air debate.

The valley air district is one of the first agencies to regulate dairy cows for air pollution, and, as with any new area of research, the district expected information gaps, Sweet said. Scientists have been researching ozone for decades, he said, and they still make discoveries.

By the end of the year, the district hopes to have new data from Frank Mitloehner's bovine bubble study at UC Davis, and from C.E. Schmidt, an independent contractor who has done research for the state air board.

Funding them is a concern, Sweet said, and the dairy industry may have to chip in. Regulators have $50,000 on hand to fund the Schmidt study. The industry is prepared to pay for the rest, contributing as much as $300,000 to new research, if necessary, said J.P. Cativiela, a spokesman for the Community Alliance for Responsible Environmental Stewardship.

There's nothing sinister about dairymen's interest in science, industry leaders say. Expensive gadgets won't improve air quality if cows don't pollute much in the first place, they said.

"Everyone wants to sensationalize everything," said Kevin Abernathy, executive director of the California Dairy Campaign. "What's there to sensationalize? It's time to go to work."

- September 2003: A new state law requires the local air district to begin regulating the dairy industry. The industry later sues, saying science behind new rules is obsolete.
- September 2004: A legal settlement between the air district and the dairy industry delays controls until new research is completed.
- August 2005: District and industry officials strike an informal deal to ward off another lawsuit over disputed science.

## Back-seat driver: 'Hydrogen Highway' to nowhere?

**A weekly look at transportation issues**

By Tony Bizjak, staff writer

Sacramento Bee, Monday, Aug. 29, 2005

With all the uproar over gas prices, we should note there is one influential Californian who wants to free us from our oil addiction.

Gov. Arnold Schwarzenegger continues to push to create what his people call a "Hydrogen Highway" in California.

His goal is to get private industry to team up with the state to build up to 100 hydrogen fueling stations across California in the next five years.

That alone will be difficult and costly. And, it will be done with no assurance that California and the rest of the country actually can make the epic jump from driving on gasoline to cruising on hydrogen fuel cells.

There are plenty of doubters.

It's easy to be dubious about hydrogen fuel for vehicles.

For one, people have been predicting for decades that hydrogen technology for everyday use is just around the corner. It's still on the other side of the corner.

Affordability is a big issue.

In Irvine, the mayor and some council members are test-driving a hydrogen-powered car to show off the technology. They also may be showing off the technology's Achilles' heel - the car costs $1 million.

Still, momentum for hydrogen as the new fuel seems to be growing.

The timing is good. With gas prices so high, and growing fears that the planet's oil reserves can't keep up anymore, it's become harder and harder for regular people to be blasé about using unclean fossil fuel to move us around.

Hydrogen, on the other hand, apparently won't run out and, ideally, won't create pollution.

Mixing it with oxygen creates electrical energy to run the car. Its "exhaust" is just warm water.

Chicago's Mayor Richard Daley once drank some hydrogen exhaust to publicize that fact.

But, pollution-causing fossil fuels still are generally needed to produce a lot of hydrogen.

Hydrogen technology won't be pollution-free until it can be created in mass with clean power such as solar.

The Schwarzenegger administration recently cited some reasons it is pushing hydrogen fuel technology:

* Three-quarters of the state fails to meet federal air quality standards, due mostly to motor vehicle-created pollution.

* Some pollution-related health problems, such as childhood asthma, appear to be entrenched.

* The state is running into shortages in oil-refining capacity, and gets hit with some of the highest prices in the country.

* National security may be compromised because of our overdependence on petroleum.

Why is the state pushing to have 100 fueling stations in place by 2010, especially when it is uncertain whether automakers will build hydrogen fuel vehicles in large numbers?

It's because others around the country, including the federal government, are seriously exploring their own concepts of a Hydrogen Highway.

Schwarzenegger's people say they want California to be a leader because it means bringing business and investment to the state.

"The goals of this program are extremely challenging and success is uncertain," said Craig Marks, who headed a recent National Academies analysis of the federal effort to explore hydrogen fuel.

"But it could have an enormous beneficial impact on energy security and the U.S. economy."

So, will we be buying hydrogen-fueled cars five or 10 years from now?

Automakers themselves aren't sure yet they can build economical hydrogen-fueled cars for the mass market.

They and the federal government reportedly have talked about coming to a conclusion on that by 2015.

## Air quality to be discussed

By Lakiesha McGhee, staff writer

Sacramento Bee, Sunday, Aug. 28, 2005

The Orangevale Community Cabinet on Friday will feature Larry Greene, executive director of the Sacramento Metropolitan Air Quality District.

The meeting - sponsored by Sacramento County Supervisor Roberta MacGlashan - will be held from 7:30 to 8:30 a.m at Annie's Breakfast & Steaks, 8800 Greenback Lane.

Bakersfield Californian commentary, Tuesday, Aug. 30, 2005:

## Does your child's school bus look familiar to you?

By CHUCK POOCHIGIAN, Fresno

As students across the state return to class, parents should take a close look at the school bus their child is riding on.

California lags far behind the nation in retiring old school buses. Amazingly, some buses manufactured in the 1950s when I was going to elementary school are still transporting students

today. With a half-century worth of advances in technology there is little excuse for these vehicles to still be on our roads.

Nearly one out of three buses in our state's fleet fails to meet federal or state standards. Of the approximately 15,000 school buses on California roads, nearly 5,000 were manufactured before 1987 and don't meet pollution guidelines. Of those, nearly 1,000 were made before 1977 and pose a double threat because they don't meet federal safety standards, either.

These buses aren't equipped with things like multiple emergency exits, warning lights, upgraded brakes, rollover protection and other features to keep our kids safer. Kids who ride on buses equipped with new safety features are actually safer than those who ride to school in cars.

Further, older buses generate 10 times more pollution than newer, cleaner models.

California leads the nation in many notable categories, but having the dubious distinction of having the most unsafe and gross polluting school buses shouldn't be one of them.

Given our air quality problems, ensuring funding for the urgent replacement of these vehicles should be a top priority.

It can be very difficult for school districts to find the money it takes to replace or upgrade old school buses. The number of these old buses still in use indicates that the state must refocus its efforts.

My Clean Air and School Bus Safety Program bill, which would retire all of the state's dangerous pre-1977 buses that don't meet safety or air quality standards would also go a long way toward replacing pre-1987 buses that cause high levels of pollution.

It is regrettable that this sensible program is stalled in the Legislature. Retiring these vehicles is an investment in our kids and our air quality that can't wait.

Fortunately, the final budget that Gov. Arnold Schwarzenegger signed included $25 million for the replacement of pre-1977 buses, and to retrofit buses made before 1987. This down payment should retire approximately 100 vehicles that don't meet safety standards, and retrofit approximately 850 that don't meet air quality guidelines.

It is a good start, but we still have a way to go until California's school bus fleet is modernized so that our children and our air are no longer compromised.

In announcing funding for the replacement of old school buses, Gov. Schwarzenegger noted, "They're dinosaurs, and they should be extinct." He also signaled his support for the Clean Air and School Bus Safety Program, which would replace all of the state's pre-1977 vehicles over the next five years.

The primary role of state government should be to protect the public safety of its citizens, especially our kids. An investment in cleaner, safer school buses will benefit our schoolchildren, and improve our air quality. It is a win-win program for California.

***State Sen. Chuck Poochigian, R-Fresno, represents Fresno, Madera, Mariposa, San Joaquin, Stanislaus and Tuolumne counties.***

Modesto Bee editorial, Monday, Aug. 29, 2005

## Proposal for fuel standards leaves much to be desired

If Americans used less gas in their cars, a great many good things would happen - less dependence on foreign oil, savings at the pump, slowing of greenhouse gas emissions, cleaner air.

Too bad none of that appears to matter to the Bush administration.

The proposed federal fuel standards for light trucks and sport utility vehicles came out last week and, as expected, they were a disappointment.

The Bush administration proposed a modest tightening of fuel economy for some minivans, light trucks and SUVs. Fuel efficiency standards for such vehicles would increase by amounts ranging from a tepid 2.2 mpg to a dismal 0.8 mpg over four years. The administration claims that would save 10 billion gallons of gas in 15 years (the lifespan of a car).

Big whoop. That's less than a month's worth of fuel, and not nearly what this country needs to save nor what is easily achievable even with today's technology.

But it gets worse. Because the proposed rules establish six new categories of light trucks based on weight, these rules could encourage automakers to make more of the worst gas hogs. The biggest SUVs and Hummers aren't even touched by the new rules.

Another noxious provision in this proposal would bar California - and states that hope to follow its lead - from enforcing its historic law to reduce greenhouse gases.

Already joined with the nation's automakers in a suit to invalidate California's greenhouse gas law, the administration has buried on page 150 of the 169-page report, a provision that says: "A state law that seeks to reduce motor vehicle carbon dioxide emissions is both expressly and impliedly pre-empted."

So much for California's efforts to protect the air. With gasoline topping $3 a gallon in some cities, the biggest gas guzzling SUVs beginning to lose their appeal and greenhouse gas emissions a recognized global crisis, the administration had a perfect opportunity to demand serious fuel efficiency improvements. Instead it offers short-term protection to the most backward-looking elements of the auto industry, a boon to oil company executives and an attack on states that seek to protect the environment and the health of their residents.

Letter to the Modesto Bee, Monday, Aug. 29, 2005

## Good reasons for driving a hybrid

A recent letter disputed the long-term advantage of cars using alternative energy sources ("'No-emission cars' don't spare the air," Aug.11), citing the electricity used to provide hydrogen for fuel-cell engines and for the recharging of batteries in electric cars. I can't speak to those specific vehicles, but as the owner of a Toyota Prius, I do know that this argument does not apply to the hybrid.

The hybrid switches automatically between gasoline and electricity for power. It has a battery, but power is regenerated by the use of the brakes and the rotation of the wheels and fed back into the battery. The battery never needs recharging from an external source. At least as important, the emission of smog-forming pollutants is decreased by 90 percent compared with a conventional car, and carbon dioxide emissions are 50 percent lower.

While the ticket price is a little higher, there is more to be concerned about than our personal pocketbook. We can no longer hide our heads in the sand as we fritter away our natural resources and continue to destroy our world.

Jean Tennney, Modesto