

Honk If You Love Quiet

Residents are being driven to distraction by rising traffic noise levels.

The din is shown to be unhealthy, but officials often turn a deaf ear.

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by Ralph Vartabedian

For the first 16 years, Fred Tilker's life on Paseo del Prado, Spanish for "meadow path," was as tranquil as the name implies.

But in recent years, the volume of pickup trucks and sport utility vehicles on the residential street in Yorba Linda has grown sharply. Noise blasts through the walls and windows of Tilker's ranch-style house.

"When the really loud ones go by, they rattle my wife's china and we have to stop talking," said Tilker, 65, a retired engineer.

His complaint to the local police chief elicited a polite letter explaining that noise was a low priority. Tilker considered moving, but his wife, Ingrid, talked him out of it. Now he is thinking about spending \$17,000 on double-pane windows and joining a legion of other Americans in the pursuit of quiet.

Traffic noise is growing sharply in communities across the country — wealthy, poor, urban, rural. The volume of vehicles, particularly heavy big rigs, has climbed steeply over the last decade. And people are driving faster, further amping up the noise.

Pickups and SUVs, which are significantly louder than cars, are proliferating on residential streets. As well, more vehicles of all types are being equipped with noisy, high-performance exhausts and powerful stereo systems.

Activists say the rising din is no mere annoyance. Noise well below levels that damage hearing can increase blood pressure, fatigue and stress, medical studies show. Researchers have found that traffic noise near schools interferes with learning.

As the racket grows, people with no escape acquire a sense of hopelessness. In a 1999 census report, Americans cited noise as their most serious complaint about their neighborhoods, surpassing even crime and concerns about public schools. Nationally, noise is the leading reason people want to move.

"They call laws that govern noise nuisance laws," said Thom de Stefano, a freelance writer in Toronto who is co-founder of Quiet Please United, which pushes for tougher laws on vehicle noise. "That's a monstrous understatement, like calling kidnapping a petty offense."

A 1999 federal housing survey in the Los Angeles-Long Beach region found that occupants of 220,000 homes were so troubled by traffic noise that they wanted to move. People in more than 1 million households noted the presence of noise in their communities, and occupants of more than half a million homes found it "bothersome," the survey showed.

For many, moving is an unattainable dream, particularly for low-income people in the

noisiest locations.

Over a deafening roar from heavy trucks on the Long Beach Freeway just 30 feet away, Lewis Failes said he would leave his mobile home in South Gate if he could afford to.

Every few seconds, big rigs pass over bumps or dips in the road, jostling their 8,000-pound steel shipping containers and creating what sounds like small explosions.

"The ground shakes underneath my home," Failes, a retired draftsman, shouted on his front porch one recent morning. "It goes on all day and all night. I try to listen to music, but the vibrations make my CD player skip. I can't hear it anyway.

"It seems to get worse every day."

As communities run short of empty land, more housing is being built alongside major highways, a trend evident in fast-growing cities such as Las Vegas, Palmdale and Houston.

"Urban America is getting noisier," said Jack Freytag, director of Charles Salter & Associates, a San Francisco acoustics consulting firm. But in terms of remedies, he said, the problem "has been on the back burner because local communities can't get it together technically to understand the problem."

One result has been a surge in noise-related litigation. About 1,000 residents living along an extension of the Foothill Freeway in Los Angeles and San Bernardino counties have sued the state Department of Transportation and other agencies, alleging that the road has created "intolerable noise" and cracked their home foundations since it opened 15 months ago.

The plaintiffs, who live within a quarter of a mile of the freeway, are seeking additional sound walls and other noise-reduction measures, said their lawyer, Lee Jackson. Caltrans has not filed an answer to the suit.

Other Nations Acting

Policymakers in Europe and Asia long ago woke up to noise as a public health problem.

European and Asian nations, as well as the World Health Organization, have set goals for sharply reducing noise from all sources and tightening restrictions on motor vehicles in the next few years. Japan will force its automakers to reduce car noise by more than 50% by equipping them with quieter tires and exhaust systems.

The U.S. has no national noise policy. States and localities are left to devise their own standards. The Environmental Protection Agency was empowered in the early 1970s to set federal noise rules on everything from lawn mowers to cars. But President Reagan canceled funding for the program in 1982 and shut the EPA's Office of Noise Abatement.

Economic growth is one cause of the noise boom. Americans are driving 27% more miles than they were a decade ago, extending the hours of peak noise.

What is more, traffic is audible across a wider swath of territory along major roads.

Big rigs are key contributors, particularly in national transportation hubs such as Southern California. The U.S. Department of Transportation reports that 7.9 million large trucks were registered in 2002, 31% more than a decade earlier.

Pickups, large SUVs and other light trucks, which now account for half of all new vehicles sold in the U.S., produce twice as much noise as cars, even at relatively low speeds, according to acoustics experts and auto industry representatives.

"SUVs and trucks produce more engine noise and more tire noise," said Elizabeth A. Deakin, director of the UC Berkeley Transportation Research Center. "We have more noise and air pollution because of our fondness for these large vehicles. It is clear that you can tell the difference between a car and an SUV sitting in an office or at home when these vehicles go by."

A car traveling at 35 mph generates noise at about 65 decibels, measured at the side of the road. Pickups and SUVs put out 75 decibels, a doubling of the sound level. A vacuum cleaner, by comparison, produces about 70 decibels.

Car manufacturers are tuning exhaust systems in many models to produce more noise in a narrow band of low frequencies. They say car buyers like the distinctive sound. But the tuning can make the exhaust seem louder and the sound waves penetrate walls more easily, said Freytag, the acoustic engineer.

Higher speeds also increase tire, engine and exhaust noise, as well as aerodynamic noise, the sound generated by air flowing around a moving vehicle. Congress repealed the national 55-mph speed limit in 1995 and states promptly raised freeway speed limits by as much as 20 mph.

Among the most politically contentious noise issues is the growing popularity of high-performance exhaust systems, which account for more than \$100 million in annual sales, according to the Specialty Equipment Market Assn., a trade group based in Diamond Bar. The modified systems are typically installed by car owners or custom muffler shops.

In recent years, SEMA has successfully sponsored legislation across the nation that has limited the ability of police officers to write tickets for excessive noise.

In 1959, the California Vehicle Code made it illegal to modify an exhaust system to produce more noise than the equipment supplied with the vehicle. Many states went further, outlawing any tampering with exhaust systems.

Political Connections

Now, custom exhaust systems are legal in California so long as they do not generate more than 95 decibels, measured 20 inches from the tailpipe with the engine revved up. That is about the same noise level produced by a gasoline-powered lawn mower. Mufflers supplied with new cars typically generate about 75 decibels. Under the SEMA-sponsored California law, motorists ticketed for excessive noise can have their exhaust systems tested by a referee at certain smog check stations. If the sound level registers 95 decibels or lower, the system is certified as legal.

SEMA has persuaded other states to adopt similar legislation. Steve McDonald, the trade group's legislative affairs director, said many police officers had been writing

tickets based on their own mistaken judgment of what sounded too loud. But McDonald acknowledged that most modified exhaust systems were louder than the original equipment.

"What I find disturbing is that these companies promote incivility," said Les Blomberg, founder of the Noise Pollution Clearinghouse in Montpelier, Vt.

Blomberg works full time at his cause, maintains an office with a few staff members and seeks to raise public recognition of noise as a social and environmental problem. The group runs a website — <http://www.nonoise.org> — and lobbies for tougher laws.

Noise Free America, in New Orleans, has a similar agenda. Its executive director, Ted Rueter, a former political science professor at UCLA, writes guest editorials lambasting "noise terrorists." The group facetiously bestows "noisy dozen" awards on businesses, politicians or local governments that it deems "noise polluters." Last year, SEMA was among the targets.

Even if their tactics are sometimes lighthearted, activists said, the underlying problem is serious.

Moderate but long-term noise — generally over 60 decibels — damages the health of children and possibly adults, causing elevated blood pressure, coronary disease, peptic ulcers and higher levels of stress hormones, studies have shown.

Studies in Austria found that schoolchildren exposed to an average noise level greater than 50 decibels learned far more slowly than children in communities with noise below 40 decibels, said Gary W. Evans, a professor of design and environmental analysis at Cornell University who helped conduct the research.

"What we have found is that even if noise is not loud enough to damage hearing, it can affect speech recognition," Evans said. "When children live in a noisy environment, they learn to tune out the noise. But they also tune out speech and they fall behind."

Kerry Koerbling, who teaches fourth grade at Soto Elementary School, near the Golden State Freeway in East Los Angeles, said the noise outside his classroom made it hard to communicate, particularly for students who used English as a second language.

"It is a distraction that pulls them away from what they are doing," Koerbling said. "Their attention just goes." After a long battle, the American National Standards Institute last year issued tough new acoustic standards for schools, recommending that future classrooms have an ambient noise level of 35 decibels. That's similar to the noise level in a library. The standards are purely voluntary.

Most classrooms in the Los Angeles Unified School District do not meet that standard and many are twice as noisy, said Angelo Bellomo, the district's director of environmental health and safety.

Many future schools may also exceed the recommended noise level. David Lubman, a school acoustics expert in Orange County, said that many potential school sites were along roads where traffic noise registered above 75 decibels. Making classrooms quiet would require insulated walls, double-pane windows and

sophisticated ventilation systems.

Many Southern California homeowners have been living with the freeway din for years and vainly hoping for solutions.

Caltrans has spent \$1 billion erecting 600 miles of sound walls since the early 1970s. Local transportation agencies are putting up additional sound barriers at a cost up to \$3 million per mile. The walls provide some relief to people living right next to them, cutting noise by an average of eight decibels, Caltrans engineers said. But the benefit drops off sharply just a few blocks away.

So some homeowners are making their own fixes. Private spending on special acoustic windows, sound-absorbing panels and similar products is growing. Quiet Solutions, a Silicon Valley company, makes sound-absorbing drywall that costs about \$100 a sheet, compared with about \$5 for standard drywall. Despite the cost, sales are doubling every quarter, said its chief executive, Marc Porat.

Pressure from foreign countries on the auto industry could help curb the decibel level in the U.S., said Tim Jackson, senior vice president of global technology for Tenneco Automotive's Walker brand of exhaust systems.

"You can already see examples where European and Japanese influence is becoming mainstream in our design of vehicles for North America," Jackson said. "The vehicles coming off the showroom floors today are clearly quieter than their predecessors of 10 years ago."

In addition, tire makers are reducing noise with better-designed treads, according to Karl Sundkvist, a Goodyear engineer who specializes in tire acoustics. But consumers are also shifting to bigger and wider tires that tend to make more noise. "It is driven by famous people and their preferences," Sundkvist said of such trends. "People look at rock stars, athletes and movie stars and they want the same thing. It has gone to extremes."

At his Yorba Linda home, Fred Tilker worries that it will be a long time before he gets any relief. His street climbs uphill and has a posted speed limit of 40 mph. Pickups and SUVs downshift just as they pass his front door. On a recent evening, the din reverberated through the house.

"It keeps getting worse every month," he said.