

The American Noise Pollution Epidemic: The Pressing Need to Reestablish the Office of Noise Abatement and Control



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Overview

Noise Free America: A Coalition to Promote Quiet strongly supports reestablished funding for the Office of Noise Abatement and Control (ONAC) within the United States Environmental Protection Agency (EPA). President Biden and Congress should include adequate yearly funding for ONAC in the federal budget.

The American public cares greatly about noise pollution. A Census Bureau report indicates that noise is Americans' number one complaint about their neighborhoods and the most significant reason why they wish to move.¹ In New York City, more than 85 percent of calls to the "311" hotline concern noise.²

In 1981, the EPA estimated that close to 100 million Americans had exposures to traffic noise that were significant enough to be damaging.³ In 2014, University of Michigan researchers estimated that 104 million Americans had annual average noise exposure of 70 or more decibels" and were thus "at risk of noise-related health effects. Tens of millions more may be a risk of heart disease and other noise-related health effects."⁴

Jane E. Brody of The New York Times notes, "We live in a noisy world. Young and old alike are beset by sounds over which we may have little or no control: power mowers, leaf blowers, snow blowers, car and house alarms, sirens, motorcycles, loudspeakers, even movie previews. We attend rock concerts, weddings, parties and sports events at which the music is so loud you can hardly hear the person sitting next to you. At home, televisions, stereos, and computer games are often turned up so loud that listeners cannot hear a doorbell or a telephone. Many 'modern' restaurants have opted for noise enhancement instead of abatement. And try having a conversation in a school cafeteria at lunchtime."⁵

At the International Congress on Noise as a Public Health Hazard, then-Surgeon General Dr. William Stewart stated, "Calling noise a

nuisance is like calling smog an inconvenience. Noise must be considered a hazard to the health of people everywhere.”⁶

The Office of Noise Abatement and Control (ONAC)

The Noise Control Act of 1972 (42 U.S.C. 4901 to 4918) established a national policy to promote a healthy, noise-free environment for all Americans. The Act requires the coordination of federal research and activities in noise control, authorizes the establishment of federal noise emissions standards for commercial products, and authorizes the dissemination of information to the public regarding the noise characteristics of commercial products.

To enforce the Noise Control Act, the Office of Noise Abatement and Control was created within EPA.

In 1981, the director of ONAC was informed that the Office of Management and Budget, under President Reagan’s order, was eliminating all funding for ONAC—and that the issue was non-negotiable. Congress complied. Of the twenty-eight environmental, health and safety statutes passed between 1958 and 1989, “the Noise Control Act of 1972... stands alone in being stripped of budgetary support.”⁷

President Reagan stripped ONAC of its funding because of pressure from industries affected by ONAC’s noise regulations. Reagan was committed to deregulating the economy. He also asserted that noise pollution was merely a state and local matter.

Even though ONAC’s funding was eliminated, the Noise Control Act of 1972 remains in effect. The EPA remains legally responsible for enforcing the Act’s provisions—but lacks the funds necessary to do so.

To make matters worse, the Noise Control Act forbids local and state government from regulating many types of noise, making it more difficult for local jurisdictions to control and reduce noise pollution.

The elimination of the federal noise office is responsible, to a significant degree, for the uncontrolled levels of noise pollution in the United States today. Alice Suter, a noise consultant commissioned by the Administrative Conference of the United States (a federally-chartered body) to study US noise policy, states that noise tends to escalate with population growth and urbanization, and both have grown substantially since ONAC's elimination.⁸

Sidney A. Shapiro, University Distinguished Chair in Law at Wake Forest University, states that the EPA had been engaged "in a wide variety of noise pollution abatement activities under the Noise Act and the Quiet Communities Act," including "identifying sources of for regulation, promulgating noise emission standards, coordinating federal noise research and noise abatement, working with industry to develop consensus standards, disseminating information and educational standards, and sponsoring research concerning the effects of noise and abatement techniques. Under the Quiet Communities Act, EPA provided grants to state and local governments for noise abatement."⁹

Following the Reagan administration's de-funding of ONAC, no presidential administration proposed its re-funding. Presidents George HW Bush, Bill Clinton, George W. Bush, Barack Obama, and Donald Trump all failed to take action against noise pollution.

The Noise Problem Today

In the forty years since ONAC was abolished, a culture of noise has taken root in American society. In this new culture, it's cool to be heard--and the louder the better. Whole new industries are thriving from noisy products aimed at disturbing the peace.

There are many sources of noise pollution, including gas-powered leaf blowers, home stereo systems, cars without working mufflers, car alarms, airplanes, helicopters, back-up beepers, keyless entry systems

tied to car hoking, piped-in music in stores and restaurants, dog barking, and train horns.

Two of the chief noise-making industries in the United States today are the amplified car stereo industry and the modified muffler industry.

Cars with amplified stereo systems, known as “boom cars,” emit up to 120 decibels of sound (equivalent to a rock concert or sandblasting). Noise at this level is unconscionable, yet millions of Americans are subjected to the outrageously loud noise of boom cars every day. Noise levels should not exceed 80 decibels.

Since 2017, residents of South Jersey have been assaulted with noise from “boom parties” originating in Philadelphia. The noise comes from throngs of large car stereo speakers, producing 175 decibels of sound. The noise affects 100 square miles of South Jersey. The noise shakes houses and rattles windows and floors.¹⁰ The noise typically goes from 11:00 on Saturday nights until Sunday morning at 5:00.

Dawn Prince of Westville, New Jersey commented, “It’s a loud booming. It’s a bass noise more than you can hear lyrics. It sort of rattles the house, if you crank up the bass on the car.” Gloucester mayor Daniel Spencer states that “it’s such a sound that it almost goes through your body, the bass is so intense.”¹¹

ONAC was created specifically to prevent these unsafe products such as loud car stereos from making it to the market. Without federal oversight of product manufacturers, citizens suffer.

Each year, electronics stores sell millions of powerful amplifiers and subwoofers and the problem is getting worse. Some auto manufacturers (including Ford and Honda) are now installing amplified stereo systems as standard equipment in their cars, hoping to attract the youth market.

Boom cars are such a problem that the United States Department of Justice issued a white paper, "Loud Car Stereos," in an attempt to help law enforcement deal with the boom car problem.

The report, written by Professor Michael Scott of the University of Wisconsin-Madison Law School, states, "Playing car stereos loudly can be an act of social defiance by some, or merely inconsiderate behavior by others. For yet others, it is a passionate hobby, an important part of their cultural identity and lifestyle. Judging by the sales marketing of car stereo manufacturers and dealers, the interest in car stereo competitions and the sums of money spent on car stereos, police are confronting a popular and lucrative phenomenon. It is not easy to change the behavior of those who see loud car stereos as an important part of their lifestyle."¹²

Police departments nationwide are inundated with complaints about boom car noise. In many communities, boom cars are the most frequent reason people call the police. Boom cars are a strain on the resources of law enforcement agencies nationwide and a source of anguish for citizens forced to endure their relentless noise.

However, police departments often respond that there are other "priorities" and that they lack the "resources" to address noise issues. noise complaints are often ignored. Many citizens are so overwhelmed by daily noise from boom cars that they are forced to move. Those who cannot move often suffer depression, anxiety, sleep deprivation, and even thoughts of suicide.

Without the reinstatement of ONAC, there is little, if any, hope that boom car levels will subside. In fact, boom cars have been on a steady upward trend for the last twenty years. Without immediate federal oversight of this class of products, the problem will get worse.

Another group of noise-making products that have reached epidemic proportions are modified car and motorcycle exhaust systems (also known as "loud pipes"). Many motorcyclists remove their mufflers altogether to generate the "loud pipes" sound.¹³

The roar from modified vehicle exhausts can produce 120 decibels of noise when throttled up. Again, noise at this level is highly dangerous, causing hearing loss in a matter of minutes.

Most of the noise pollution from loud pipes is generated by motorcycles. In response to the outcry caused by their noisy bikes, motorcyclists have adopted the mantra, “Loud Pipes Saves Lives.” This statement is not true. There is no research to support this erroneous line of thinking. Indeed, most motorcycle crashes are head-on collisions— while the noise from loud pipes is mostly heard from behind.¹⁴

In the US Department of Transportation’s report, “Action Plan to Reduce Motorcycle Fatalities,” then-US Secretary of Transportation Mary Peters, an avid motorcyclist, stated, “In August 2005, I suffered a broken collar bone in a motorcycle crash. Had it not been for my protective gear—including my helmet—I am convinced I would have suffered severe injury, or even death.”¹⁵

Driving safely and defensively, wearing helmets and other safety gear, and obeying traffic laws saves lives—not loud pipes roaring through the streets emitting 120 decibels of unwanted noise into homes.

A very important point: “loud pipes” are illegal. Every state’s motor vehicle code states that it is illegal to remove, alter, or modify motor vehicle exhausts for the purpose of making additional noise. Further, the EPA requires that each motorcycle’s equipment label matches the original equipment.¹⁶ Also, the federal Noise Control Act of 1972 specifies that motor vehicle noise should not exceed 82 decibels—which is far less than the noise generated from a motorcycle with loud pipes.

In Chicago, downtown citizens are increasingly fed up with extreme noise from caravans of motorcyclists. Alan Ruffin, a Michigan Avenue resident, stated that the problem occurs virtually every day: “I’ve lived in the neighborhood for 20 years and I’ve never heard the noise level

to this extent before. Between motorcycles and cars with modified engines, it'll drown out my radio, television. It's that loud."¹⁷

Another downtown Chicago resident, James Levine, stated that the extreme motorcycle noise begins around 9:00 or 10:00 pm and continues until 2:00 or 3:00 am. "It used to be isolated on just the weekends, but we're hearing it during the week as well," he said.¹⁸

The hordes of noisy motorcyclists use social media to promote the noisemaking events; riders come from the city, suburbs, and Indiana and Wisconsin.

The Noise Control Act of 1972 was created to control and reduce noise pollution.¹⁹ Without the reinstatement of ONAC, noise pollution will continue to increase.

Noise and Quality of Life

Noise has devastating effects on neighborhoods and communities. Noise forces many citizens to live in unhealthy environments.

One example of a noisy, unhealthy community is Glendora, California (26 miles east of Los Angeles). Jason Duarte, a Glendora resident, stated that "can't count how many times I've been shocked into consciousness by the sonic assault of a motor vehicle with after-market exhausts and/or loud music." Duarte states he feels 'like a prisoner in my own home because it is unbearable to open the windows and listen to motorcycles and cars come roaring by all day long at 40+ mpg, especially those with loud modified exhausts or boom cars. The noise pollution has caused me to be more fatigued due to lack of sleep, which is affecting my performance at work."

Marcylynda Barba, another Glendora resident, commented that "the noise here has been getting worse. The loud noise from motorcycles, boom cars, and loud exhaust cars are not only a nuisance; they are also dangerous. The noise levels have increased and become very distressing—to the point where we now avoiding opening our

windows.”²⁰

Another noisy American community is Pflugerville, Texas (a suburb of Austin). Jerry Johnson, a Pflugerville resident, notes that the city is home to numerous gangster-type, high-powered Dodge Chargers, Ford Mustangs, and other vehicles with roaring muffler systems. He states that “these vehicles are proudly paraded about our city streets with tinted windows. The drivers of these vehicles have turned our once-quiet farming community into a cesspool of auditory chaos. They have made a direct contribution to a worsening of mental health, including increased stress, heightened anxiety, and an inability to concentrate.”²¹

Over the past several decades, millions of American have fled the central city, hoping to find peace and quiet in the suburbs. Their hopes have been dashed. Suburban areas are often very noisy, with powerful amplification systems, gas-powered leaf blowers, and car alarms. Many suburban areas are “leaf blower hell,” with constant noise from lawn mowing, leaf blowing, and hedging.

Karen Orr, the Safe and Healthy Communities Chairwoman of the Florida League of Conservation Voters, notes that “those seeking relief from intrusive noise pollution are often disappointed. Their new suburban house is more miserably noisy than the city apartment they left behind.... A new horror of suburban life is “outdoor entertainment” equipment pushed by the home electronics industry in the form of outdoor loudspeakers, tiki bars wired for sound, loudspeakers imbedded in hot tubs, televisions for the porch and patio. It begs the question: what next? Mega bass boom systems for the riding lawn mower?”²²

America’s search for peace and quiet in the suburbs has come at a huge cost. People are moving further and further away from the central city, in large part to escape noise. This has resulted in the destruction of green space and farmland. It has increased traffic, lengthened commuting times, and worsened air pollution.

Increasingly, there is no place to hide from unwanted noise.

Noise and Health

Noise pollution is a serious threat to public health and welfare. Noise is much more than just a nuisance—it is a major health hazard.

Noise is a stressor on the human body. It causes the “fight or flight” syndrome, releasing cortisol and other harmful chemicals into the blood stream. Over time, these chemicals build up in the body, leading to a host of health problems, including cardiovascular disease, aggression, chronic fatigue, headaches, high blood pressure, mental illness, and anxiety.²³

In addition, a growing body of evidence confirms that noise pollution has both temporary and permanent effects on the endocrine and autonomic nervous systems.²⁴

According to Lisa Goines, RN, and Louis Hagler, MD, “It has been postulated that noise acts as a non-specific biologic stressor eliciting reactions that prepare the body for a fight or flight response. For this reason, noise can trigger both endocrine and autonomic system responses that affect the cardiovascular system and thus may be a risk factor for cardiovascular disease. These effects begin to be seen with long-term daily exposure to noise levels above 65 decibels or with acute exposure to noise levels above 80 to 85 decibels.”²⁵

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Noise also accelerates and worsens the development of mental problems. Noise pollution can cause and contribute to “anxiety, stress, nervousness, nausea, headache, emotional instability, argumentativeness, sexual impotence, change in mood, increase in social conflicts, neurosis, hysteria, and psychosis.”²⁷

Noise is also a major cause of chronic fatigue--a debilitating condition that include digestive problems, sight disturbances, physical weakness, a compromised immune system, viral infections, swollen

lymph nodes, loss of memory, and muscle and joint pains. In short, noise makes a person tired.²⁸

Noise levels above 80 decibels are associated with an increase in aggressive behavior. Numerous scientific studies indicate that noise may trigger unfriendliness, social disengagement, anger, dissatisfaction, disappointment, depression, anxiety, distraction and agitation. Noise can lead to a sense of helplessness. Noise-related agitation has been the cause of shootings, stabbings, and murder. The number of violent incidents spurred by noise is on the rise as noise pollution increases.²⁹

According to the American Speech-Language-Hearing Association, noise has many other physical effects, including increased blood pressure, heightened breathing rate, ulcers, and fetal development disruption.³⁰

In 2017, the American Academy of Nursing issued a report, “Reduce Noise: Improve the Nation’s Health.” The position paper concludes that well-known studies in the last 15 years document the fact that noise exposure harms health “by contributing to many diseases, including cardiovascular diseases, obesity, developmental delays, mental illness, and reduced job and academic performance.” The academy states that “reducing noise will decrease the incidence of diseases and decrease health care costs. The American Academy of Nursing supports efforts to determine sources of harmful noise, establish programs (e.g., educational surveillance, testing) to reduce noise, and promote policies and legislation to control noise exposures.”³¹

Noise and Children

Excessive noise is very harmful to children. Noise pollution creates developmental delays in fetuses and cognitive delays in toddlers. Noise can cause or worsen learning disabilities and hearing loss in children.³²

There is clear evidence that excessive noise harms unborn children. While still in the womb, the developing child is responsive to sounds in the mother's environment. Especially loud noises have been shown to cause changes in heart rate. In addition, the fetus is not fully protected from environmental stress resulting from noise.

A Japanese study of over 1,000 births indicated that noisy areas produced a higher proportion of low-weight babies. These birth weights were under 5.5 pounds, which the World Health Organization defines as prematurity.³³

Noise pollution has a clear effect on cognitive task performance. Noise decreases motivation, increases errors, and impairs performance at work and school. Noise strongly affects memory, problem-solving, and reading attention. Cognitive and language development, as well as reading achievement, are lessened in noisy homes. Students experience reduced achievement when their homes or schools are located near highways and airports.³⁴

The American Academy of Pediatrics Committee on Environmental Health reports that noise affects reading, learning, problem solving, motivation, social and emotional development, and school performance.³⁵

All this noise is damaging children's hearing. The Center for Audiology reports that "teenage hearing loss in the U.S. is on the rise, with recent studies indicating 1 in 5 teenagers exhibiting a slight hearing loss. This 30 percent increase in teenage hearing loss since the early 1990's is due in large part to the ever-present earbuds attached to smartphones and portable music players. Teens are more likely to engage in risky behaviors, including listening to loud music and using lawn and power tools with no hearing protection."³⁶

The American Academy of Audiology reports that "a growing number of kids and teens are damaging their hearing by prolonged noise exposure to loud noise. This type of damage is called noise-induced hearing loss, which is permanent and almost always preventable!

Approximately 12 percent of all children ages 6-19 have noise-induced hearing loss.”³⁷

In addition to environmental noise, children are besieged by noisy toys and personal listening devices that can cause permanent damage to their hearing. Toys can produce dangerously loud levels of noise. Children are also subjected to extremely loud noise from video games, computer games, stereo equipment, and action movies.

Jane E. Brody of The New York Times notes that “even toys meant for young children can generate ear-damaging levels of noise. The American Speech-Language-Hearing Association lists as potential hazards cap guns, talking dolls, vehicles with horns and sirens, walkie-talkies, rubber squeaky toys, musical instruments, and toys with cranks. According to the association, some toy sirens and squeaky rubber toys can emit sounds as 90 dB, as loud as a lawn mower.”³⁸ America’s children need ONAC to protect them from the outrageously loud toys that have become commonplace.

The Future

Addressing noise pollution is an urgent matter. The time is now. President Obama emphasized that we face “the fierce urgency of now.” It is urgent that we reduce the growing plague of noise pollution now.

A quieter America is a better America. A quieter America will result in better communities, healthier citizens, safer children, less hearing loss, and increased productivity. This vision is within our reach.

If we do not take strong action against noise pollution, the situation is going to get even worse. The reinstatement of ONAC is desperately needed to stem the rising tide of unnecessary noise--giving Americans the peace and health they want and deserve.

The Need for Federal Action

A number of municipal governments have attempted to respond to noise pollution. Such large cities as Chicago, Milwaukee, Dallas, Fort Worth, and Cleveland are cracking down on excessive noise. So, too, are Elkhart, Indiana; Gulfport, Mississippi; Peoria, Illinois; Hoover, Alabama; Pascagoula, Mississippi; Bloomington, Indiana; and Green Bay, Wisconsin—among many others. Also, a few cities are starting to crack down on motorcycle noise (including Boston, Denver, and Anaheim).

Local action against noise is commendable. However, it is no substitute for a strong, coordinated, national response to the growing problem of noise pollution.

Noise pollution is a national problem requiring a national approach. Municipal and state governments do not have the resources to address the issue of noise. While some state and local governments are attempting (in vain) to address noise pollution, most state and local governments are not trying at all. Further, municipal and state governments have no legal authority to regulate products.

In the areas of water pollution and air pollution, federal, state, and local governments work cooperatively to administer programs. The presence of state and local programs to protect the air and water does not diminish the need for federal involvement.

The Office of Noise Abatement and Control was responsible for requiring product labeling, issuing noise emission standards, facilitating the development of low-emission products, coordinating federal noise reduction programs, assisting local and state noise abatement efforts, and promoting noise education and research.

The Quiet Communities Act of 2021 (H.R. 4892), sponsored by Representative Grace Meng (D., New York), calls on ONAC to have the following responsibilities:

1. Promoting the development of effective state and local noise control programs by providing states with technical assistance

and grants to develop the programs, including the purchase of equipment for local communities.

2. Carrying out a national noise control research program to assess the impacts of noise from varied noise sources on mental and physical health.
3. Carrying out a national noise environmental assessment program to identify trends in noise exposure and response, ambient levels, and compliance data and to determine the effectiveness of noise abatement actions, including actions for areas around major transportation facilities (such as highways, railroad facilities, and airports).
4. Developing and disseminating information and educational materials to the public on the mental and physical effects of noise and the most effective means for noise control through the use of materials for school curricula, volunteer organizations, radio and television programs, publications, and other means.
5. Developing educational and training materials and programs, including national and regional workshops, to support state and local noise abatement and control programs.
6. Establishing regional technical assistance centers which use the capabilities of university and private organizations to assist state and local noise control programs.
7. Undertaking an assessment of the effectiveness of the Noise Control Act of 1972.

In 1981, when the Reagan administration de-funded the Office of Noise Abatement and Control, funding levels were around \$10 million.

Taking inflation into account, an appropriate ONAC funding level for 2021 would be at least \$20 million. Indeed, H.R. 4892 calls for funding levels of \$21 million for each of fiscal years 2022 through 2026.

Consistent with these objectives, Noise Free America: A Coalition to Promote Quiet proposes that the federal noise pollution control office undertake these additional responsibilities;

1. Conduct a national leaf blower/ lawn mower buy-back program, whereby individuals and companies would turn in their gas-powered equipment for battery-operated equipment (which is much quieter and cleaner). The California Air Resources Board already conducts such buy-back programs.³⁹ In addition to creating significant noise, gas-powered lawn equipment generate massive amounts of noxious carcinogens. An EPA report estimates that gas-powered leaf blowers and lawn mowers generate five to ten percent of the nation's noxious emissions.⁴⁰

2. Persuade the Occupational Safety and Health Administration (OSHA) to relax their regulation requiring noisy back-up beepers. This noise is very irritating to those who live or work near construction zones. Also, the constant, routinized nature of the noise negates its function as a warning signal. Thankfully, there are much quieter alternatives:
 - An "observer/ signal person." In other words, a human being who warns when there is a danger.⁴¹

 - A "white sound" alarm, manufactured by Brigade Electronics, which can only be heard in the danger zone.⁴²

 - The variable loudness "Smart Alarm" manufactured by ECCO.⁴³

3. Direct American-based automobile manufacturing companies to stop causing car horns to honk when a car owner uses their keyless entry system. This type of noise is unnecessary and a violation of each state's noise vehicle code, which states that a car horn is only to be used to avert an accident.⁴⁴

Without appropriate federal involvement, the problem of noise pollution will continue to grow worse, damaging more lives.

Conclusion

On his presidential inauguration web site in 2009, President Obama made the following pledge: “Today we begin in earnest the work of making sure that the world we leave our children is just a little better than the one we inhabit now.”

One important way to leave the world “just a little better” is address the serious noise pollution problem and to reestablish the federal noise pollution control office.

Reestablishing the federal noise pollution control office would be consistent with the Biden administration’s “Green” initiative to improve the environment and create jobs. The Office of Noise Abatement and Control could enlist and employ noise control officers around the country, reducing some of the pressure on local police departments. It would help reduce noise pollution. It would diminish air pollution by reducing “cruising” by boom car and loud pipes drivers.

Former president Barack Obama has experienced noise pollution. In his memoir, Dreams From My Father: A Story of Race and Inheritance, Obama recounts an experience in Chicago:

That night, well past midnight, a car pulls up in front of my apartment building carrying a troop of teenage boys and a set of stereo speakers so loud that the floor of my apartment begins to shake. I’ve learned to ignore such disturbances—where else do they have to go? I say to myself. But on this particular evening I have someone staying over; I know that my neighbors next door have just brought home their newborn child; and I pull on some

shorts and head downstairs for a chat with our nighttime visitors. As I approach the car, the voices stop, the heads within all turn my way. 'Listen, people are trying to sleep around here. Why don't y'all take it someplace else?'⁴⁵

Today, millions of Americans live with this same noise situation on a daily basis.

The United States needs to tell the noisemakers to “take it someplace else.” The United States needs to reduce the growing menace of noise pollution.

The first step is for President Biden and Congress to reestablish the Office of Noise Abatement and Control within the United States Environmental Protection Agency.

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