

# 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 strongly supports reestablished funding for the Office of Noise Abatement and Control (ONAC) within the United States Environmental Protection Agency (EPA). President Obama should include adequate yearly funding for ONAC in his proposed 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. In many cities, noise is the most frequent complaint made to police departments. In 1972, the EPA estimated that 134 million Americans were exposed to non-occupational noise capable of causing hearing loss, that 44 million Americans lived in residential dwellings exposed to irritatingly high levels of aircraft and transportation noise, and that 21 million Americans faced potentially disruptive levels of construction noise.

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."

In 1973, 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."

## **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.

The Administrative Conference of the United States reports that “of the twenty-eight environmental, health and safety statutes passed between 1958 and 1980, the Noise Control Act stands alone in being stripped of budgetary support.”

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.

Sidney A. Shapiro, University Distinguished Chair in Law at Wake Forest University, states that ONAC was making “significant strides” in noise education, research, and the coordination of state and local noise abatement programs. Shapiro notes that ONAC’s funding “was eliminated just as the initial fruits of these labors became apparent.” Today, he states, “EPA is barely able to enforce its regulations, and fiscal limitations prevent it from updating them, although several are out of date or inadequate to protect the public.”

## **The Noise Problem Today**

In the almost thirty 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 public peace.

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.

ONAC was created specifically to prevent these sorts of unsafe products 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 in 2002, 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."

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, because more serious crimes must take a higher priority and police resources are limited, 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 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.

The roar from modified vehicle exhausts produce sounds of 119 decibels 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 loudest from behind.

In the US Department of Transportation's 2007 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."

Driving safely and defensively, wearing helmets and other safety gear, and obeying traffic laws saves lives—not loud pipes roaring through the streets emitting 119 decibels of unwanted noise into the homes of citizens.

Noise pollution is not limited to boom cars, modified exhaust systems, or motorcycles without mufflers. Millions of American homes are flooded with unwanted noise on a daily basis from such sources as home stereo systems, cars without working mufflers, leaf blowers, car alarms, airplane noise, and railroad noise.

The Noise Control Act of 1972 was created to abate increasing levels of noise pollution and to restore and maintain much needed relief from noise. 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 citizens to live in unhealthy environments or abandon their homes altogether in an attempt to escape.

One example of a noisy, unhealthy community is Stockton, California, a city of about 290,000, 60 miles east of San Francisco. Stockton lies on the San Joaquin River in the Central Valley of California.

In recent years, thousands of people have fled the crime and the expense of the San Francisco Bay area, hoping to find a new life in Stockton. Instead, they have found a city where boom car operators have no fear of the police.

Jim Tarantino, who left Oakland two years ago, states:

There is little or no enforcement of noise ordinances in Stockton, so boom car thugs roam our community with impunity, weekends and weekdays, day and night.



The boomers are there at every intersection, stop sign, traffic light, and parking lot. I've been assaulted by boom car noise while at home, in stores, libraries, movie theaters, and office buildings.

I can't take a short walk around my nice, serene-looking, tree-lined neighborhood without these criminals driving past me, rattling my skull with their 'music.' It's going to get much worse as the weather turns warmer and the boomers have their windows down. I am truly at the end of my rope.

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, leaf blowers, and car alarms. 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?

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.

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

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.”

Noise also accelerates and worsens the development of mental problems. Goines and Hagler state that noise pollution 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.”

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.

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.

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.

## **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.

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.

In August 1978, the Office of Noise Abatement and Control concluded, “This information points to the possibility of serious effects of noise on the growth and development of the

unborn child. While it cannot be said at what level maternal exposures to industrial and environmental noise are dangerous to the fetus, these findings do create some concern. It is known that extreme stress of any type will certainly take a toll on the fetus, but, in the case of noise, it is not known how much is required to have an effect. Whatever the effect, the risk of even a slight increase in birth defects is considerably disturbing.”

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.

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.

One study compares the effect of noise upon the test results of students in the same school. Half the students were in classrooms abutting a railroad track; the other half were not. Students in the quiet classrooms performed much better. Another study showed that students who were in classrooms away from noisy streets performed better than students in classrooms facing noisy streets.

All this noise is damaging children’s hearing. According to the Children’s Hearing Institute, hearing loss among children and young adults is rising in the United States; one-third of the damage is the result of noise.

The American Academy of Audiology reports that “about one child in eight has noise-induced hearing loss. That means some five million children have an entirely preventable disability that will stay with them for life.”

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.

The Sight & Hearing Association releases an annual list of the loudest toys. In 2008, they tested 18 toys with the help of the University of Minnesota Department of Otolaryngology. Of the 18 toys tested, 14 measured over 100 decibels and the noisiest toy measured at 120 decibels.

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 has stated repeatedly that we face “the fierce urgency of now.” It is urgent that we reduce the growing plague of noise pollution now. If the problem of noise pollution is not addressed during President Obama’s administration, it may never be addressed.

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. There are many noisy products on the horizon.

One example is the “Hornblaster,” an excruciatingly loud car horn designed to shake the earth and traumatize the ear. They blast at levels greater than 150 decibels—louder than a jet taking off 80 feet away. The unexpected Hornblasters noise causes grown men to jump in the air.

Matt Heller, the proprietor of Hornblasters, is making a full-length, hidden-camera video showing people startled by the Hornblasters noise. He laughingly calls it “Terror on the Streets.” On his web site, he brags that “these things pack some serious punch. The loudest, most annoying thing you’ve ever heard. They’ll hear you coming for miles with ‘The Godfather’ of all horns.”

Other noisy products have been developed recently: a “boom box on a backpack” (a 20” hardshell backpack with an integrated high quality digital amplifier and a pair of coaxial speakers), “The Rumbler” (an extremely loud, low-frequency siren—like a subwoofer bass—which can be heard and felt 300 feet from the vehicle), and “The Howler” (a device that emits low-frequency tones that penetrate objects within 200 feet).

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.

## **Noise Control and Federalism**

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 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 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 2005, sponsored by Congresswoman Nita Lowey (D., New York), called on ONAC to have the following responsibilities:

1. To promote 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. To carry out a national noise control research program to assess the impacts of noise from varied noise sources on mental and physical health.
3. To carry 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. To develop and disseminate 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. To develop educational and training materials and programs, including national and regional workshops, to support state and local noise abatement and control programs.
6. To establish regional technical assistance centers which use the capabilities of university and private organizations to assist state and local noise control programs.
7. To undertake 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 2009 would be at least \$20 million.

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

## **Conclusion**

On the presidential transition web site (change.gov), 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 Obama 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 put people to work locally. It would help reduce noise pollution. It would diminish air pollution by reducing “cruising” by boom car and loud pipes drivers.

Reestablishing the federal noise pollution control office would also be consistent with President Obama’s pledge to “go through the federal budget, line-by-line, ending programs that we don’t need and making the ones we do need work better and cost less.”

The Office of Noise Abatement and Control is an agency that we need. Indeed, 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?’

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 Obama and Congress to reestablish the Office of Noise Abatement and Control within the Environmental Protection Agency.

