

EPA's

**NOISE ABATEMENT
PROGRAM**

ENVIRONMENTAL PROTECTION AGENCY • WASHINGTON, D.C.

EPA's Noise Abatement Program, by Dr. Alvin F. Meyer, Jr.,
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sented at the Second National Meeting of the National
Organization to Insure a Sound-Controlled Environment,
May 19, 1971.

Noise differs from most other environmental pollutants in one very important aspect--the knowledge and technology exists now to control almost every indoor or outdoor noise problem. As a matter of fact, this is one instance where the knowledge of control techniques exceeds the knowledge about effects on human life as well as the environment.

Yet, the typical American citizen is constantly bombarded with noise--on the job, in his home, and at play. In secluded vacation retreats, the roar of mini-bikes and snow-mobiles and the sounds from transistor radios intrude upon what once was magnificent silence. And, in urban areas where 75 percent of the nation's population is located, the general din and hum of construction projects, the roar of air and surface transportation, and industrial noise, are practically ceaseless.

The over-all loudness of environmental noise has been doubling every ten years in pace with social and industrial growth, and, if allowed to continue unchecked, the cost of alleviating it in the future may be insurmountable. In the case of cities where, according to some estimates, noise levels may be rising one decibel each year, some observers fear that maybe (given such a continued rate of increase) people who dwell in the noisiest sections will be deaf in the year 2000. Already, heavy city traffic measures 90 decibels (on the A scale), five above the level which can damage hearing capacity after prolonged exposure. When the noise from transportation-related construction--which in the case of the subway being built in Washington, D. C. runs in the 90-95 decibel level--is added, it is obvious that any rate of increase cannot be tolerated.

While transportation, construction, and industry are important contributors to environmental noise, air conditioners, lawn mowers, and other items in the wide variety of power equipment now in common use also add to the problem. In fact, noise levels in apartments and private dwellings, particularly in kitchen areas, are beginning to approach those in factories. The situation is further complicated by construction practices which allow noise from the outside and from neighbors to intrude into our apartments and homes.

Many European cities have long ago established standards for sound transmission in apartment buildings and offices and for permitted noise levels in the streets. While some governmental authorities in this country have managed to enact noise control ordinances, they vary widely, ranging from overly restrictive and impractical to completely ineffectual. Moreover, these ordinances are difficult to enforce because of economic, social, or political considerations as well as the problems associated with detection and proof of violation.

More flexible building codes could also help cut down noise. Plastic plumbing pipes are quieter and cheaper than lead or copper pipes, but they are seldom used. Sound-absorbing, vibration-damping-materials can be used to curtail the noise of motors and engines.

Power generators can be quieted with baffles, exhaust silencers, and sound-absorbing materials. Just as automobile tires can be made with quieter treads, similarly noise control can be built into the design phase of other equipment and machinery. For example, one manufacturer has developed a garbage truck which is claimed to be 60 percent quieter than those in common use, and the additional cost is only \$100 more per unit.

The State and local governments are not to blame for the current problems by any means. As recently as 1968, the Federal Government's total expenditures for all of noise control were approximately \$11 million. Of these funds, more than 90 percent were spent for research

on aircraft noise. The small amount that was left was expected to take care of research on health effects, acoustics and noise control in buildings, and other things such as effects on animals and archeological structures.

Since then there has been action in several areas. In May 1969, the first Federal standards for occupational exposure to noise were issued, and five months later the first of a series of noise standards regulating aircraft noise were sent forth.

By 1970, Federal expenditures for noise-related programs had been increased 300 percent. However, 90 percent of these funds still were devoted to aircraft noise and sonic boom, leaving activities in noise research and control, including health effects, at a relatively minor level.

In an effort to correct this imbalance, the Clear Air Act of 1970 which President Nixon signed into law on December 31, 1970, called for the establishment of an Office of Noise Abatement and Control in the Environmental Protection Agency. The role of our office is to identify and classify causes and sources of noise and determine their effects on public health and welfare.

The law also calls for studies on effects of noise on people, wildlife, and property; effects of sporadic and intermittent noises; expected growth of noise problems

through the year 2000 AD; and such other data as is deemed appropriate. A special report to the Congress, which is due not later than the first of January 1971, must also be prepared. This report will include information on present Federal research and operational programs relating to noise control; on State and local laws, regulations, and enforcement capabilities; and on the state-of-the-art of noise control technology. Recommendations about a long-range noise control and abatement program will also be included.

The law also requires that all Federal agencies involved in projects generating noise, which are a public nuisance or otherwise objectionable, to consult with EPA before filing their environmental impact statement to determine possible means of abating the noise. Already these statements are being reviewed.

The considerable effort going into preparing our report to Congress well may seem to those familiar with the wealth of published reports and other presentations of data on this subject as "re-inventing the wheel." It is hoped that this can be avoided. Present plans envision a report which will provide an overview of those areas for which there is up-to-date published information, readily available in the public

domain, and concentrate on those which will assist the decisionmakers in the Executive and Legislative Branches of the Federal Government in assessing needed action and recommended programs. This report hopefully will also be of help to State and local governments, to industry, and the general public.

Because the Noise Office was established less than a month ago, it is obvious that the schedule is very tight. One source of help the office has turned to is the National Bureau of Standards, which has outstanding expertise in the noise field. Contracts are also being negotiated with a number of universities and research organizations to give some of the other information needed.

In very broad terms, these are the directions the program is taking right now. There will be:

- Heavy emphasis on the analysis of the causes and effects of noise pollution.
- Analysis of the ecological implications of noise pollution, paying particular attention to the effects on wildlife.
- Compilation and analysis of national, State, and municipal laws, regulations, and ordinances.
- Study to identify the various criteria which must be taken into account in standards setting.

-- And, analysis of the economic ramifications of noise; i.e., costs to the consumer, insurance costs, etc.

To get a better feeling of what local citizens and officials feel about the problem, a series of hearings and demonstrations to be held in various sections of the country this summer are being planned. These will be open hearings to which the public will be invited and encouraged to participate to the greatest degree possible.

Some of this may sound like the usual government way of doing business which so many people have become disenchanted with and, if the office had been in business for a number of years, it might be a legitimate criticism. But it is realized that the office is literally starting from scratch, and if it is going to develop an effective organization (as EPA certainly plans to do) there are simply some facts that must be obtained to make intelligent decisions.

This is particularly true in view of the responsibilities that would be given EPA under President Nixon's proposed 1971 Noise Control Act. Under this new legislation EPA would be responsible for the coordination of all Federal programs in noise research and control; development of criteria to protect public health and welfare; setting standards for such products as construction and transportation equipment; product labeling; research on noise effects;

development of measurement and control techniques; and technical assistance to the States.

There is little doubt that the recognition of the noise problem in America has arrived late. But now it is a matter of growing public concern, and its alleviation frequently will require actions that transcend political boundaries, be they local or State. Like air pollution, noise affects large numbers of people who have little choice in deciding whether or not they are willing to expose themselves to it. Congress is aware of this public concern and is expected to pass new legislation this session.

It must be remembered, though, that noise is a typical pollutant in that usually it is a by-product of some desirable activity and can only be avoided at some cost, either by control at the source or by exclusion from specific locations. Nevertheless, the ultimate goal should be the achievement of a desirable environment in which noise levels do not interfere with man's health and well-being or adversely affect other values which he regards highly.

HIGHLIGHTS OF THE PRESIDENT'S PROPOSED 1971 NOISE CONTROL ACT
(S.1016)

If enacted,.....

Federal Programs - the Administrator of the Environmental Protection Agency would have responsibility for coordinating all Federal programs in noise research and control.

Criteria - the EPA Administrator would have authority for the development of any noise criteria necessary to protect public health and welfare.

Standards - the EPA Administrator would have authority to set or amend standards limiting the noise-generating characteristics of new construction, transportation (including recreational vehicles and related equipment), and other equipment powered by internal combustion engines. Both domestic and foreign products would be covered.

Products manufactured after the establishment of these standards and failing to meet them would be prohibited from sale in inter-State commerce.

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Removal or making inoperative of noise control equipment on these products would also be prohibited.

States may not establish more restrictive requirements, but may issue regulations limiting use.

Aircraft Noise - the EPA Administrator would review and have responsibility for approval of Federal Aviation Administration standards for the measurement of aircraft

noise as well as regulations for aircraft noise control and abatement.

The FAA Administrator would not be able to issue a type-certificate for any aircraft, engine, propeller, or appliance that significantly affects its noise characteristics unless he had previously developed performance standards.

If the EPA Administrator believed existing aircraft noise standards to be inadequate, he might request the FAA to review them and report on the advisability of revision.

Labeling - the EPA Administrator may require a notice of levels of noise generation attached to products producing harmful noise or a notice of effectiveness for products sold on the basis of their ability to reduce noise. Both domestic and foreign products would be covered, and the removal of these notices prohibited. States may not adopt more restrictive requirements, but may establish regulations limiting conditions of use.

Enforcement - any person who violated the manufacturing standards or the labeling requirements may be fined up to \$25,000 for each violation.

Other - research on noise effects, development of measurement and control techniques; and technical assistance to State and local governments also would be authorized.

from P. L. 91-604, the "Clean Air Act."

"TITLE IV--NOISE POLLUTION

"Sec. 401. This title may be cited as the 'Noise Pollution and Abatement Act of 1970'.

"Sec 402. (a) The Administrator shall establish within the Environmental Protection Agency an Office of Noise Abatement and Control, and shall carry out through such Office a full and complete investigation and study of noise and its effect on the public health and welfare in order to (1) identify and classify causes and sources of noise, and (2) determine--

"(A) effects at various levels;

"(B) projected growth of noise levels in urban areas through the year 2000;

"(C) the psychological and physiological effect on humans;

"(D) effects of sporadic extreme noise (such as jet noise near airports) as compared with constant noise;

"(E) effect on wildlife and property (including values);

"(F) effect of sonic booms on property (including values); and

"(G) such other matters as may be of interest in the public welfare.

"(b) In conducting such investigation, the Administrator shall hold public hearings, conduct research, experiments, demonstrations, and studies. The Administrator shall report the results of such investigation and study, together with his recommendations for legislation or other action, to the President and the Congress not later than one year after the date of enactment of this title.

"(c) In any case where any Federal department or agency is carrying out or sponsoring any activity resulting in noise which the Administrator determines amounts to a public nuisance or is otherwise objectionable, such department or agency shall consult with the Administrator to determine possible means of abating such noise.

"Sec. 403. There is authorized to be appropriated such amount, not to exceed \$30,000,000 as may be necessary for the purpose of this title."

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