

A-96-01  
II-A-831

United States  
Environmental Protection  
Agency

Office of Noise Abatement  
and Control (ANR-471)  
Washington DC 20460

Noise

April 1979



# Noise Control Program

## Progress to Date



**EPA Noise Control  
Program — Progress  
to Date**

**APRIL 1979**

## CONTENTS

	Page
INTRODUCTION .....	iv
QUIET COMMUNITIES ACT IMPLEMENTATION (Section 14) .....	1
State and Local Assistance .....	1
Airport, Highway and Rail Transportation Planning Assistance .....	5
Community Noise Counseling program .....	6
Dissemination of Public Information .....	6
Research .....	8
NOISE EMISSION STANDARDS AND REGULATIONS .....	10
Identification of Major Sources of Noise, Criteria, and Control Technology (Section 5) .....	10
Noise Emission Standards for Products Distributed in Commerce (Section 6) .....	11
Railroad Noise Emission Standards (Section 17) .....	13
Motor Carrier Noise Emission Standards (Section 18) .....	14
Low Noise Emission Products (Section 15) .....	14
Product Labeling (Section 8) .....	15
Enforcement .....	15
Standards Development .....	17
Aircraft Noise Standards (Section 7) .....	17
FEDERAL PROGRAMS (Section 4) .....	19
Federal Noise Program Coordination .....	19
Consultations .....	20
Reports on Federal Noise Programs .....	20
EIS Review .....	20
Interagency Agreements .....	21
Federal Facility Compliance with State and Local Noise Laws .....	21
STUDIES AND SPECIAL PROJECTS .....	22
Strategy and Economics .....	22
Noise Information System .....	22
International Activities .....	22

## INTRODUCTION

The EPA Noise Program was formally established on December 31, 1970 under Title IV of the Clean Air Amendments of 1970. Title IV directed the Agency to conduct a full and complete investigation and study of noise and its effect on public health and welfare and to report the findings to Congress within one year. That report provided the information needed to support the first national noise control legislation in the United States: the Noise Control Act of 1972, which was signed by the President on October 27, 1972.

Under the Noise Control Act of 1972, the Agency was mandated to:

- Identify major sources of noise
- Regulate those identified sources
- Propose aircraft noise standards to the FAA
- Label noisy products
- Engage in research, technical assistance, and dissemination of public information, and
- Coordinate all Federal noise control efforts.

As the regulatory effort progressed, along with the other aspects of the program noted above, it became evident that although effective source regulations at the national level were needed, those regulations must be augmented by effective noise control programs at the State and local level. The Agency began putting more emphasis on providing the necessary technical assistance to States and localities in 1978, with limited resources.

During Congressional oversight hearings in Spring of 1978, much of the testimony highlighted the need for developing more effective local noise control programs, expanding the public education/information program, and providing increased funding for technical assistance at the State and local levels. In response to these needs, Congress passed the Quiet Communities Act of 1978. The Act was signed into law on November 8, 1978. In addition to extending the provisions of the 1972 Act for one year, the Quiet Communities Act amended Section 14 to significantly increase the EPA role in aiding States and localities in establishing noise control programs and in providing the public with

information on the harmful effects of noise on their health and welfare. The new Act mandates EPA to fund, through grants, cooperative agreements or contracts:

- Financial assistance to States and localities for:
  - Problem identification
  - Noise control capacity building
  - Transportation noise abatement
  - Evaluation and demonstration of noise control techniques.
- Establishment of regional technical assistance centers
- Provision of assistance in staffing and training for State and local programs
- Maximum use of Older Americans in noise control programs
- Conduct of a national environmental noise assessment
- Development of education materials
- Loans of equipment to States and localities
- Increased noise research.

This booklet describes EPA's activities in carrying out the Noise Control Act of 1972 and the Quiet Communities Act of 1978. Where appropriate, the relevant sections of the Act are noted for each major area.

Included at the back of the booklet is a listing, by subject area, of all available EPA publications along with the information necessary to obtain copies. Also, a mailing list application is included as the centerfold. If you would like to receive EPA noise documents in the future, tear the form out carefully, fill it in and drop it in the mail.

You may also contact the EPA Regional Noise Program Chief in your nearest EPA regional office. A list of their names and addresses is provided.

Charles L. Elkins  
Deputy Assistant Administrator for  
Noise Control Programs

### QUIET COMMUNITIES ACT IMPLEMENTATION (Section 14)

State and local governments represent the vital linkages in EPA's attempt to achieve its established goal of stimulating 40 State and 400 effective local noise control programs. State and local participation and partnership are absolutely essential to reach the objectives of controlling and abating noise levels. It is also at the State and local levels that the principal responsibilities reside for dealing with noise issues and problems.

In this regard, and to establish and maintain State and local noise control capabilities, Congress emphasized State and local financial and technical assistance in the Quiet Communities Act of 1978. Under the authority provided in the Act, as well as building on successful components of the original Noise statute, EPA has developed financial and technical assistance programs and activities designed to help States and localities identify and remedy noise issues and problems.

#### State and Local Assistance

Assistance to State and local agencies is provided by the 10 EPA regional offices. Efforts to date have concentrated on encouraging the development of State and local noise control programs to implement in-use and operational measures for immediate noise control benefits and to complement EPA regulatory efforts. In the future, financial assistance will be available to States and localities in accordance with the Quiet Communities Act amendments to continue these efforts. The regional offices are helping States and localities prepare applications.

EPA also surveys and assesses State and municipal environmental noise programs. In 1971, EPA surveyed these programs in the 50 States and a number of large cities. The information obtained helped to promote passage of the Noise Control Act of 1972. In compliance with the provisions of the Act, EPA has conducted similar surveys in 1974 and 1978. The results of these surveys are published in "State and Municipal Noise Control Activities, 1973-1974" and now in a similar volume for 1978. The latter survey was directed toward the 50 States and 900 communities with populations over 25,000. That report describes the status of State and local noise control programs, their capabilities and activities, and the specific areas in which technical assistance from EPA is needed.

#### *Training of Noise Control Personnel*

EPA sponsors regional noise workshops to train State and local officials in all aspects of environmental noise. These workshops are administered by the EPA regional noise program personnel. EPA has conducted over 90 workshops, attended by more than 3,600 officials, in various locations throughout the country.

EPA has also developed a noise training manual for three target audiences — decision-makers, environmental managers, and entry level noise technicians. It is being adapted into an accredited correspondence course for State and local noise control officials.

#### *Sound Measurement Equipment*

EPA advises State and local governments on types and uses of sound measurement and analysis instruments. Sound level meters and other types of equipment are available for loan to States and localities through the EPA regional noise offices. EPA also evaluates instruments such as sound level meters and community noise monitoring systems.

#### *Development of Improved Methods for Measuring and Monitoring Noise*

EPA has recently developed a community noise monitoring and assessment manual. This manual is designed to provide local community officials with uniform guidelines for the design and implementation of a community monitoring program, including a locally administered social survey program and an acoustical noise monitoring program. EPA has developed an automated system called LISTEN (Local Information System to Evaluate Noise) to assist communities in assessing their noise problems and in planning their strategy for abating and controlling noise. Three manuals have been developed to describe the system and its associated computer programs. EPA will provide computer services to communities on a limited basis to assist in the analysis of community-collected data.

#### *Preparation of Model State and Local Legislation*

Both a *Model Community Noise Control Ordinance* and model State noise control enabling legislation have been developed by EPA. To date, 20 States have incorporated *Model Ordinance* guidelines in their noise control programs. The model State law was developed in cooperation with the Council of State Governments and was published by them in 1974. As a complement to the model community ordinance, EPA is developing a Code of Recommended Practices with simple and technically correct local enforcement procedures.

*State and Local Noise Control Research and Demonstration  
Program - Quiet Communities Program (QCP)*

In September 1977, EPA launched its first Quiet Communities Program (QCP) research and demonstration project in Allentown, Pennsylvania. This is a pilot project to demonstrate the application of the best available techniques for local noise control. The program includes a community noise assessment program, model local noise control strategy, noise control legislation, and an enforcement program. The emphasis of the QCP effort is on total community involvement and action, aided by EPA guidance and fiscal support. Two additional pilot QCP demonstrations will be initiated in mid-1979.

Allentown has completed the first two stages of the program: (1) a comprehensive assessment study to identify and define their noise control needs, and (2) development of a local noise control strategy incorporating the assessment data. A responsive noise control ordinance has been drafted and is currently being considered by Allentown's City Council. It is anticipated that the noise ordinance will be in effect by May 1979. Design and development of responsive noise control and enforcement programs are currently underway and will be implemented when the noise ordinance becomes effective.

*Each Community Helps Others (ECHO)*

The ECHO program is designed to aid communities throughout the U.S. in developing or improving noise abatement programs through the advice and assistance of volunteer noise control experts from other communities. Program emphasis is on the transferability of local noise control skills and experience. The ECHO program, initiated in 1978, continues to operate successfully. Examples of current ECHO activities are:

- Washington Metropolitan Council of Governments continues to provide technical assistance to Norfolk, Virginia. As a result of this effort, the Norfolk noise director has now become an advisor to emerging noise programs in the Tidewater area of Virginia.
- The State of Connecticut has provided assistance to the State of Iowa regarding the development of a State noise capability in Iowa.
- Daytona Beach, Florida assisted Charlotte, North Carolina by training sixteen city employees in the use of sound measurement equipment.
- Colorado Springs, Colorado is assisting Rapid City, South Dakota and Casper, Wyoming.



- Allentown, Pennsylvania is assisting various neighboring communities in the Lehigh Valley area.
- Portland, Oregon has assisted Anchorage, Alaska. In December 1978, Anchorage adopted a new community noise ordinance — the fifth community to adopt such an ordinance after receiving ECHO assistance.

Approximately 55 communities have received assistance under the ECHO program to date.

#### *Regional Technical Assistance Centers*

A number of regional technical assistance centers, using the capabilities of universities and private institutions, will be established. These centers will supplement the Regional effort in providing technical assistance and training to State and local officials.

#### *Senior Environmental Employment Program (Older American Workers)*

The Senior Environmental Employment Program was designed to provide meaningful employment in environmental areas to workers 55 years of age or older. One aspect of this program provides support for one man-year of effort to each EPA Regional Noise Program Chief to help States and communities develop noise control programs and/or provide remedies to noise source problems. The program is funded by a grant from HEW's Administration on Aging (AOA) under terms of an interagency agreement between AOA and EPA.

The program has proved to be an excellent source of manpower at the local level as well. Allentown, Pennsylvania used 40 Older Americans to conduct a local survey. Other communities are following suit.

The Older Americans receive formal training courses in health effects of noise, basic acoustics, and noise program development as well as continuous on-the-job training.

#### *State Assignee Program*

The Noise Office is participating in the national State Assignee Program, a program in which professionals are hired by the Agency and detailed to the appropriate State Office for a two-year period. EPA's Noise State Assignees provide support in the development of State noise programs. Upon completion of their two-year term appointment, the State Assignees may be employed by their respective State agencies.

This program, initiated in 1978, currently includes one position each in California, Connecticut, Florida, Iowa, Maryland, Michigan, New Mexico, New York, North Dakota, and Washington.

#### **Airport, Highway and Rail Transportation Planning Assistance**

##### *Airport Assistance*

EPA has developed a simplified and objective approach for determining aviation noise impacts, which is called the Airport Noise Evaluation Process. This process was designed for use by individuals lacking an in-depth background in aircraft acoustics. The process utilizes information pertaining to airport operations and local demographic characteristics. In most cases, the EPA process can be used without computers by using the EPA-developed workbook manual *Calculation of Day-Night Levels [Ldn] Resulting from Civil Aircraft Operations*. The manual is normally revised as new aircraft operating procedures come into general use. For example, EPA recently published an addendum to the workbook entitled "Sound Exposure Levels (SEL) Chart for Civil Jet Transport Aircraft Takeoffs Using ATA Procedures (Adopted December 1976)."

The Agency is also continuing to distribute its *Airport Noise Abatement Planning* booklet for citizens wanting to learn what they can do at a local level. The booklet distribution is normally made in conjunction with the showing of the EPA-produced film "Jet Roar," which describes what some communities are doing about their airport noise problems.

The Agency is currently participating in several airport noise abatement planning programs, as part of its technical assistance program. In addition to helping in the solution of real problems, the Agency is using these efforts as a vehicle for the continuing refinement of its noise abatement planning tools and programs.

EPA is conducting a noise abatement planning study of Philadelphia International Airport. This study is being performed jointly with the FAA. This joint study should result in a set of effective noise control measures implemented at the airport and in the surrounding impacted area, in addition to the required report to Congress.

##### *Highway and Rail Transportation Planning Assistance*

In addition to the extensive work in airport noise abatement, EPA, in response to its new mandates, is developing noise abatement plans for areas around other types of major transportation facilities. Studies have been initiated to develop noise abatement planning manuals for various modes of surface transportation. These documents would be similar to the manual already developed for airport noise abatement planning.

### Community Noise Counseling Program

In response to the Quiet Communities Act of 1978, EPA has established, through a contract with the National Retired Teachers Association/American Association of Retired Persons (NRTA/AARP), a program to train qualified Older Americans to become focal points for handling noise complaints in their own communities. The ultimate goal of the program is to foster effective community solutions to local noise problems through a network of volunteer noise counselors. There are now 11 noise counselors being paid under Title V of the Older Americans Act along with three volunteers, in 13 States. Plans call for reaching a total of 20 counselors by the end of 1979. EPA has sponsored two training sessions to equip the selected Older Americans for their challenging roles as community noise counselors.

The Agency is also initiating a similar program through the National Urban League to help reduce environmental noise in urban neighborhoods. By the end of 1979 there will be 10 inner city noise counselors.

### Dissemination of Public Information

#### *New Education/Information Projects*

A major public education/information effort was launched in 1976, and has been given increased emphasis in response to the Quiet Communities Act of 1978. New programs and materials designed and developed to provide the public with information on the effects of noise on their health, and quality of life and on specific remedies to alleviate or reduce this growing environmental problem include:

- Two noise modules developed to be used in junior and senior high schools as part of the science curriculum (currently being pilot-tested). Once the modules have been tested, a cooperative effort will be initiated through the HEW Office of Education to incorporate them in curricula throughout the United States. This will enable a standardized national approach to educating school age children on hazards of environmental noise.
- A noise module designed to be used by the International Union of Operating Engineers (heavy equipment operators) in their apprenticeship training program (currently being pilot-tested) in three major union training centers. This curriculum will be adopted for use in apprenticeship training programs of other major construction unions, marking the first comprehensive national effort to reduce construction site noise through instruction in the health hazards of noise, proper methods of hearing protection, quieter working techniques, etc.

- An Interagency Agreement with the Department of Labor's Bureau of Apprenticeship and Training and the Law Enforcement Apprenticeship Program (LEAP) to include "noise enforcement" in their apprenticeship program and provide training in noise enforcement techniques for LEAP training officers in five regional workshops.
- The development of three brochures for school children and young adults to be disseminated at the time hearing tests are given. Although such tests are mandated by each State, many States currently do not test all school children regularly. At present, no followup information is given to students on hearing health care and the effects of noise on their overall health. These brochures are also designed with a message for parents of school children, to foster a more comprehensive approach to reduce the impact of excessive environmental noise on their health and quality of life.
- Production of an eight-minute mime film, "A Quieter World: It's Up to Us"
- Production of the following publications:
  - *Noise: A Health Problem*
  - *Noise and Your Hearing*
  - *Hear, Here*
  - *Think Quietly About Noise*
  - *Quieting in the Home*
  - *ECHO* (An explanation of the Each Community Helps Others Program).
- EPA is also active in distributing public education materials by exhibiting at national meetings of organizations such as the National Parent/Teachers' Association, the National League of Cities, and the National Association of Counties. Additional exhibits are made available to State and local noise personnel in their public outreach programs.

*National Information Center for Quiet*

EPA has also established under contract the National Information Center for Quiet as a national clearinghouse for the collection and dissemination of public education/information materials on noise, its effects, and methods used to quiet the environment.

The Center will conduct an annual Symposium on Community Noise and disseminate program-package kits developed for civic/fraternal organizations as well as general information about noise. The Center's address is:

National Information Center for Quiet  
P.O. Box 57171  
Washington, D.C. 20037

#### Research

In the area of noise effects research, studies are being conducted concerning:

- Effects of high level noise during pregnancy (animals)
- Investigation of the effects of protracted noise exposure on blood pressure and heart rate using Rhesus monkeys
- Assessment of the relationship between annoyance and intrusiveness of noise sources
- Effects of high level, low frequency noise (animals)
- Longitudinal study of the effects of noise on children.

In 1978, EPA helped support and participated in a multi-nation seminar on the effects of noise on wildlife. New information in this area will assist EPA and other agencies in making environmental impact evaluations.

Also in 1978, EPA completed two investigations dealing with people's perception of noise and their attitudes about their noise environment:

- *Comparison of Various Methods for Predicting the Loudness and Acceptability of Noise*
- *The Urban Noise Survey.*

The findings and conclusions of both investigations are being employed in EPA environmental noise impact assessment procedures. The Agency is also currently studying State and Federal programs for worker compensation for occupational hearing loss.

In a joint effort with the U.S. Air Force Aerospace Medical Research Laboratory, two other studies were completed in 1978:

- Typical noise exposures of Americans
- Effects of noise exposure greater than 24-hours on hearing.

In the area of technology research, an RD&D program with Purdue University dealing with identification of truck noise sources and engine enclosure investigations has been completed. The results are being utilized in the engine and truck technology investigations (see below). An EPA/NASA program concerning development of several "quiet" propeller configurations for small general aviation aircraft is continuing.

Other RD&D programs initiated in FY77 and continuing through FY79 deal with:

- Quiet truck technology
- Quiet tire technology
- Internal combustion engine technology.

In January 1979, EPA sponsored a noise research technology symposium with invited participation from government agencies, industry, universities, and the private sector. The primary objective was to develop a national noise technology research agenda for both the Federal government and the private sector. Proceedings of the symposium will be published in April 1979.

## NOISE EMISSION STANDARDS AND REGULATIONS

### **Identification of Major Sources of Noise, Noise Criteria, and Control Technology (Section 5)**

#### *Criteria and Levels Documents*

Under this Section of the Act, EPA is required to publish two major documents: the *Criteria Document* and the *Levels Document*.

The *Criteria Document* represents an appraisal of available knowledge relating to the health and welfare effects of noise.

The *Levels Document* identifies levels of environmental noise requisite to protect the public health and welfare with an adequate margin of safety. In accordance with the Act, this document does not take economics and technology into account. However, it does provide helpful guidance in evaluating the benefits to be gained from noise abatement actions. An abbreviated version of the *Levels Document* is now available.

The agency is currently undertaking studies to supplement the *Criteria* and *Levels* documents. These studies include work on: hearing loss, intrusive characteristics of noise, and dose/response relationships.

A major deficiency in the *Criteria* document results from the lack of knowledge of the non-auditory effects of noise. The Quiet Communities Act of 1978 mandates EPA to investigate the effects of noise "with special emphasis on non-auditory effects." EPA is conducting research involving noise-induced hypertension in monkeys and workshops on cardiovascular effects, and is involved in working groups studying long term non-auditory effects.

#### *Major Sources Identification*

EPA is further required to publish reports identifying major sources of noise, to provide information on controlling noise from those sources, and to regulate those sources. The Agency has issued several separate identification documents. The first identification, published June 21, 1974, encompassed portable air compressors and medium and heavy trucks, for which regulations have been promulgated.

The Agency has subsequently identified

- Wheel and crawler tractors (construction equipment)
- Truck-mounted solid waste compactors (garbage trucks)
- Motorcycles and motorcycle replacement exhaust systems
- Buses
- Truck-transport refrigeration units
- Power lawn mowers
- Pavement breakers and rock drills.

EPA has been conducting a number of pre-identification studies that will allow decisions to be made on a phased basis concerning possible identification of additional major sources of noise. Among the products studied are automobiles and light trucks, tires, chainsaws, and earth moving equipment used in construction.

#### *Cost and Technology Reports*

EPA has published a number of cost and technology reports, some as separate reports, others as background documents to regulatory actions. These are noted in the list of EPA reports in the back of this booklet.

#### **Noise Emission Standards for Products Distributed in Commerce (Section 6)**

The Agency is required under this Section of the Act to promulgate noise emission regulations for any product identified as a major noise source if standards are feasible. The Agency was specifically directed to consider products in the following categories:

- Construction equipment
- Transportation equipment  
(including recreational vehicles and related equipment)
- Motors and engines  
(including any equipment of which an engine or motor is an integral part)
- Electrical or electronic equipment.



In addition to health and welfare effects, these standards must take availability of technology and cost of compliance into account.

#### *Final Regulations Issued*

On January 14, 1976, the Agency published final regulations on newly manufactured *portable air compressors*. These regulations will have the effect of eliminating such compressors as a major source of construction site noise.

On April 13, 1976, the Agency published noise regulations for *medium and heavy trucks*. These regulations will reduce the urban traffic noise impact for 97 million people. A more stringent standard has been reserved for promulgation in the 1985 time period, and work is now underway to develop the necessary data on which this future regulatory decision will be made. On November 23, 1977 (42 FR 59975), as the result of a petition from the Recreation Vehicle Manufacturers Association, EPA issued a stay of effectiveness of these regulations as they applied to motor homes, pending Agency reconsideration of the applicability of the rules to that product. A similar stay on fire apparatus was published on January 12, 1978 (43 FR 1796).

#### *Proposed Regulations Issued*

On July 11, 1977, EPA proposed noise emission regulations for *new wheel and crawler tractors* having horsepower ratings from 20 hp to 500 hp (42 FR 3580-4).<sup>\*</sup> These machines are generally used for bulldozing and front-end loading operations at construction sites. Public hearings on the proposed rule were held in Philadelphia and Los Angeles. Public comments received on this rule are under review.

On August 26, 1977, the Agency proposed standards for *new truck mounted solid waste compactors*, better known as *garbage trucks* (42 FR 43226). The proposed regulation limited compaction cycle noise from all refuse vehicles manufactured after January 1. Public hearings were held in Salt Lake City and New York City, and the comments received on this proposed rule have been reviewed and considered in the development of the final rule, expected to be published in the fall of 1979.

---

<sup>\*</sup>Federal Register Issue and page number.

On September 12, 1977, EPA proposed regulations to substantially reduce exterior and interior noise emitted from *new city buses*, *school buses*, and *inter-city buses* (42 FR 45776). A final regulation is expected in late 1979, or early 1980.

On March 15, 1978, EPA proposed regulations to reduce noise from *new motorcycles* and *new motorcycle replacement exhaust systems*. Street, off-road, and moped-type motorcycles are also covered. Public hearings were held in Los Angeles, St. Petersburg, Fla., and Washington, D.C.

The proposed regulation also calls for compliance labeling for new motorcycles and a label concerning its Stationary Sound Level. This label will aid State and local officials in enforcement against tampering and unlawful modifications. Final regulations are expected in the fall of 1979, or early 1980.

Notices of proposed rulemaking have not yet been issued for truck transport refrigeration units, lawnmowers, or pavement breakers and rock drills.

#### Railroad Noise Emission Standards (Section 17)

Under this Section of the Act, EPA promulgated on December 31, 1975, regulations setting specific maximum in-use noise standards applicable to trains operated by interstate rail carriers.

EPA is in the process of broadening the scope of its railroad noise emission standards to include most interstate rail carriers' equipment and facilities. This action was ordered by the United States Court of Appeals for the District of Columbia Circuit on August 23, 1977, in response to a petition for review by the Association of American Railroads. Publication of both proposed and final rules is projected for 1979, in compliance with the court order.

The Department of Transportation, through the Federal Railroad Administration, is responsible for the enforcement of these regulations. Compliance procedures for the original regulation were published in the Federal Register on August 23, 1977 (42 FR 42343).

The EPA rules provide for comprehensive Federal preemption over State and local rail carrier noise ordinances on the equipment and facilities covered by the EPA standards, as the Noise Control Act requires.

#### **Motor Carrier Noise Emission Standards (Section 18)**

On October 29, 1974, EPA promulgated regulations, effective October 15, 1975, setting specific maximum in-use noise standards applicable to vehicles over 10,000 pounds Gross Vehicle Weight Rating (GVWR) operated by interstate motor carriers. This regulation will lessen the noise impact for approximately 10 million people.

The regulation also requires vehicle exhaust systems not to be defective and bans the use of certain noisy tread tires on vehicles subject to the regulation.

Present plans call for revising these in-use standards to require new trucks meeting the more stringent new product standards promulgated under Section 6 to continue to meet more stringent levels while in use.

The Department of Transportation's Bureau of Motor Carrier Safety (BMCS) is responsible for enforcement of this regulation. BMCS issued compliance regulations on September 12, 1975. BMCS and several States and localities are now enforcing these regulations.

#### **Low Noise Emission Products (Section 15)**

On February 13, 1974, EPA issued certification procedures for low-noise emission products to be purchased by the Federal government. Since these procedures can apply only to products for which a new product regulation has been issued under Section 6, no program could be initiated prior to promulgation of the first new product regulation. EPA is now implementing a comprehensive program concerning low-noise emission products.

LNEP levels have been set in all regulations proposed after 1976. A Notice of Proposed Rulemaking for LNEP criteria and procedures for use by EPA in determining whether a product can be certified as a low-noise-emission product and qualified as a suitable substitute for products purchased by the Federal government was published on May 27, 1977 (42 FR 27442). LNEP levels for portable air compressors and medium and heavy trucks were also proposed in that notice.

### Product Labeling (Section 8)

Under this Section, EPA is required to label any product

1. Emitting noise capable of adversely affecting the public health or welfare
2. Sold wholly or in part on the basis of its effectiveness in reducing noise.

On June 22, 1977, the Agency published the *Proposed General Provisions for Noise Labeling* and *Proposed Noise Labeling Requirements for Hearing Protectors*. Public hearings on these proposed rules were held in Washington, D.C., Cedar Rapids, Iowa, and San Francisco. Final rules for both actions are expected in 1979.

Studies are underway on several household and consumer products to determine their candidacy for noise labeling. The Agency has developed minimum standards for voluntary product noise labeling by manufacturers that could be accepted by EPA in lieu of mandatory labeling imposed by the Agency. These will be published in the General Provisions final rules. Manufacturers of noise producing products and their trade associations are being encouraged to review these and to develop voluntary labeling programs to obviate Federal intervention.

### Enforcement

The Noise Enforcement Division is responsible for development and enforcement of regulations applicable to new products regulated or labeled under Sections 6 and 8, respectively, of the Noise Control Act. In addition, the Division assists EPA Regional Offices, and States and localities in enforcing Federal noise control standards and regulations and in designing and enforcing complementary State and local controls.

The Federal enforcement strategy used for the portable air compressor and medium and heavy truck regulations consists of the following:

- Early manufacturer testing of normal production products which are representative of future products (Product Verification)
- Statistical sampling and testing of new products off the assembly line (Selective Enforcement Audit)
- Manufacturer's time-of-sale warranty

- Tampering prohibitions and noise related maintenance instructions placed in consumer literature; e.g., owner's manuals
- Administrative orders, including recall of noncomplying products.

An Advisory Circular System has been established for both the compressor and truck regulations. The Circulars discuss topics of common interest and applicability to the regulated industries and aid firms in complying with the Act and regulations. They are used to communicate procedural and policy matters involving the interpretation and administration of the regulations.

The Division is monitoring the actions taken by manufacturers of portable air compressors and medium and heavy trucks in compliance with new product noise emission standards. Fourteen inspections at truck manufacturers' facilities have been conducted to determine whether the manufacturers are complying with the regulations. Thirteen inspections have been conducted at compressor manufacturers' facilities.

Six selective enforcement audits of truck production have been conducted. Two audits of compressors have been conducted.

In four instances, vehicles were recalled for repair or modifications. Each recall was initiated by the manufacturer as a result of his own inspection and monitoring activity, and in each case, a small number of products were involved.

The EPA Noise Enforcement Facility in Sandusky, Ohio, is equipped with a low-speed passby test track and a stationary runup pad for testing trucks and compressors. These testing facilities have been used to conduct EPA tests on regulated products and to correlate manufacturers' test facilities. Sixteen correlation studies were conducted with truck manufacturers and seventeen with compressor manufacturers.

The Division has two Mobile Noise Enforcement Facilities (MoNEF) that have been used in site comparison studies with truck and compressor manufacturers and in the development of field test data on additional products being studied for future regulatory action. The MoNEFs have also been used to conduct surveillance testing of regulated products in use and are used periodically to assist State and local noise control officials in the development and refinement of their enforcement capabilities.

A major portion of the Division's State and local guidance is currently focused on the development of noise enforcement training materials for State and local police officers.

The Division has conducted two noise enforcement training courses at local police academies. The Division is also developing similar training materials for health officers and guidance materials for State and local prosecutors.

#### **Standards Development**

To foster a better understanding of EPA and other Agencies' needs in developing regulations, the Agency sponsored a standards development workshop under the auspices of American National Standards Institute and the Acoustical Society of America in cooperation with the National Bureau of Standards. This three-day workshop was held in December 1977. The reports resulting from this effort will be available in 1979. They will lay out regulatory standards needs for the future and the basis on which technical standards should be developed.

#### **Aircraft Noise Standards (Section 7)**

##### *Submission of Proposals to FAA*

Although aviation noise regulatory authority rests with the FAA, EPA is mandated to play a significant role in the aviation regulatory process. Under Section 7 of the Act, EPA was directed to prepare a comprehensive report on the problem of aircraft/airport noise and to submit regulatory proposals to the FAA. The FAA must either accept the EPA proposals or state in the Federal Register why the proposals were rejected, accompanied by a detailed analysis of EPA's submittal.

If EPA believes that any FAA action regarding the EPA proposals does not adequately protect the public health and welfare, the Agency can request the FAA to publish a report in the Federal Register further stating the basis behind any FAA decisions.

EPA has submitted to the FAA six Source Regulations, two Operational Regulations, and one package dealing with the Airport Noise Regulatory Process.

Hearings on all of the EPA proposals have been held. The FAA has accepted the EPA proposals concerning reduced flap approach and landing and retrofit, except for retrofit of business jets. The FAA has not yet taken any formal action on the EPA proposals pertaining to FAR PART 36 (levels for new design aircraft) or airports. The FAA has issued notices of decisions not to prescribe the EPA proposals pertaining to: propeller driven small airplanes, except for some minor provisions; fleet noise level; two-segment visual approach and landing; two-segment instrument approach and landing; and minimum altitudes.

### *SST Activities*

EPA provided technicians and equipment to monitor the noise emissions of the initial Concorde 02 SST flights into Dulles International and Dallas, Fort Worth airports in September of 1973. The results of that monitoring exercise were published and are available.

In January 1976, EPA provided a detailed analysis of the issues associated with the applications of British Airways and Air France for Concorde SST flights to U.S. airports.

In October 1977, the FAA published a supplemental draft EIS and a supplemental NPRM that reopened the docket on two previously submitted EPA proposals. The FAA conducted hearings, at which EPA testified, and subsequently published in the Federal Register on June 29, 1978, amendments to FARs 21, 36, and 91. Although many aspects of this final rule regulating SSTs are consistent with the EPA proposals, the FAA decided not to prescribe the EPA proposed requirements that applications for new type design SSTs be required to comply with the same noise limits as newly designed subsonic aircraft.

## FEDERAL PROGRAMS (Section 4)

### Federal Noise Program Coordination

Section 4 of the Act requires EPA to coordinate all Federal noise research and control programs. EPA has planned and organized a four part program to integrate Federal agency noise abatement policies and programs into a national noise strategy.

The first part is a Communication and Information Exchange Program consisting of three elements: (1) joint publications concerning individual agency jurisdictions, programs and accomplishments; (2) a series of directories of all Federal noise personnel and laboratory resources that can be used in joint work programs; and (3) a series of regularly scheduled informal meetings among Federal agency noise personnel. A forum that has proven successful in fostering interagency cooperation is the informal luncheon meeting at which a host agency presents its noise program and solicits inquiry and comment from the others. Since the spring of 1977, over 15 agencies have participated in the meetings. EPA and other agencies plan to continue them.

The second part of the program is a Joint Special Studies and Demonstration Program to integrate the independent Federal agency authorities into a consistent overall Federal strategy. Fifteen cooperative projects with other Federal agencies are in progress as a result of this program: 5 in surface transportation noise; 3 in construction site noise, 3 in occupational noise; and 4 special projects covering such areas as procurement and land use. These projects will develop information on and demonstrate noise control measures and then facilitate their incorporation in Federal noise policies and programs. The process will complement EPA noise regulatory activities as well as State and local noise abatement actions.

The third part of the program concerns research coordination. The Agency has established four interagency noise research panels, whose reports are listed along with the other EPA publications. The panels have generated reports that examined Federal RD&D activities during the FY73-FY75 period to determine the contribution of these efforts to the control of noise and understanding of its effects. Research activities in the areas of noise effects, aircraft noise, surface vehicle noise, and machinery noise were reported. The panels were reactivated in 1976 to update the data base and to assess the contribution of the on-going and planned RD&D programs to meeting the long range goals of a national noise abatement and control program. Reports on this subject were published in early 1978.



The fourth part of the program is the establishment and operation of an Interagency Committee on Urban Noise. This Committee, in operation since April 1978, has developed and is implementing six initiatives to use existing Federal funds to integrate noise control into the Administration's Urban Program. The six initiatives are in the areas of Weatherization and Soundproofing, Land Use, Neighborhood Projects, Procurement, Urban Transportation and Local Noise Programs.

#### Consultations

Other Federal agencies are required to consult with EPA before prescribing noise regulations. EPA may require public review of those regulations if the Agency determines the regulations do not sufficiently protect public health and welfare.

EPA has reviewed and commented upon the policies and regulations of such Federal agencies as DOT, HUD, DOC, and GSA. Regarding the pending decision on Federal occupational noise standards, EPA has strongly stated its case for a more stringent occupational noise standard than that proposed by the Department of Labor's Occupational Safety and Health Administration (OSHA).

#### Reports on Federal Noise Programs

As a major part of its coordination activity, EPA is required to report periodically on the status and progress of Federal noise control activities. In June 1975, the Agency issued the first of such comprehensive reports describing and discussing interrelationships among the noise programs of 38 Federal agencies in the following areas: standards and regulations, hearing conservation, noise abatement, and research, development and demonstration. Since then EPA has issued reports describing the noise policies of the Navy, Air Force, HUD and FHWA.

#### EIS Review

EPA reviews about 1500 draft and 500 final statements per year. Statements in which noise is a factor are reviewed primarily in the EPA regional offices, with Headquarters providing guidelines, manuals, and technical assistance as required. Although not required to do so by law, EPA prepares EISs on certain of its own environmental regulatory activities, including noise emission regulations under the Noise Control Act.

#### **Interagency Agreements**

EPA is receiving consulting and technical support in a number of program areas (e.g., health effects, measurement, monitoring, technology demonstration) through agreements with other Federal agencies. EPA is currently working with the National Academy of Sciences Committee on Hearing, Bioacoustics, and Biomechanics (CHABA), the USAF Aeromedical Research Lab, the U.S. Army Construction Engineering Research Lab, the National Bureau of Standards, the Department of Transportation, NASA, the Department of Agriculture (Forest Service), the Naval Sea Systems Command, and the Department of Labor Bureau of Apprenticeship Training.

#### **Federal Facility Compliance with State and Local Noise Laws**

Under this Section of the Act, each Federal agency is required to comply with Federal, State, and local noise control requirements.

EPA has taken actions to ensure such compliance on the part of Federal agencies. To date, EPA has developed formal administrative guidelines and directives in the following areas:

- Project reporting by agencies
- Inspection and monitoring of Federal facilities
- Exemptions of Federal facilities.

EPA also reviews the efforts of other agencies to assure compliance.

A major on-going EPA activity is the Agency's participation in efforts of the International Civil Aviation Organization (ICAO). The Agency, through participation as an advisor to the U.S. delegate, provides recommendations on international aviation matters, exchanges views on environmental considerations, and reviews and recommends aircraft noise standards.

EPA is a major participant in the noise activities of the Paris-based Organization for Economic Cooperation and Development (OECD). EPA was the lead U.S. agency in the noise area, with its representative acting as the official U.S. delegate to the International Ad Hoc Group on Noise, which was chaired by another EPA official. The OECD Ad Hoc Group on Noise completed a two-year study in December 1977. An OECD report, "Reducing Noise in OECD Countries," was issued in 1978. The report covered:

- Decision Criteria for Noise Abatement Policies
- Economic Incentives for Noise Abatement
- Regulations and Low-Cost Measures for Noise Abatement.

An EPA official is currently the U.S. representative to the OECD steering group that is planning a major noise conference for early 1980. This conference will address national noise program policy problems, will evaluate difficult aspects of noise abatement, and will recommend steps for better harmonization of noise control efforts.

An EPA noise official chaired an international noise task group under the U.N. Economic Commission for Europe (ECE) in Geneva, Switzerland. The task force examined information on environmental noise problems and control measures and appropriate research activities related to noise control. The ECE has issued a report entitled "National Approaches to Community Noise Problems," dated 5 April 1978.

EPA noise officials also participate in:

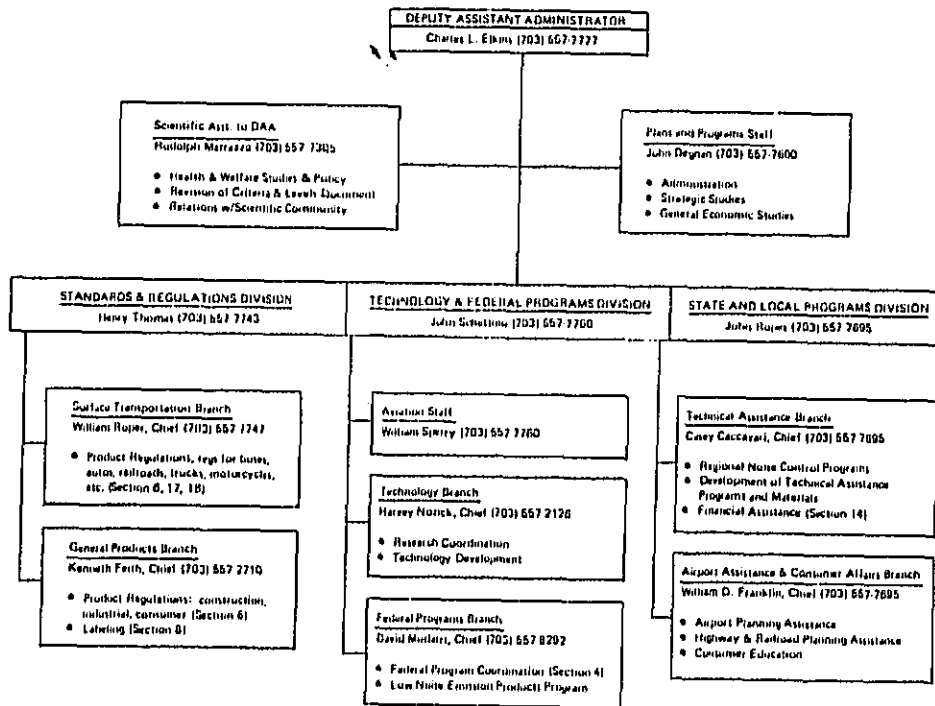
- The cooperative environment program of the Commission of European Communities, in Brussels, Belgium
- The International Commission on Biological Effects of Noise, which met most recently in Freiburg, Germany in September 1978.

### NOISE CONTROL PROGRAM BUDGETS

Fiscal Year	Office of Noise Abatement & Control		Office of Enforcement Noise Enforcement Division		Regional Offices**
	(\$ Millions)	(Positions)	(\$ Thousands)	(Positions)	(Positions)
1971	\$ .3	11	\$ 0	0	0
1972	1.2	12	0	0	0
1973	2.7	15	0	0	0
1974	4.2	45	20.6	1	0
1975	5.1	55	20.8	1	0
1976	9.8	74	385.0	18	10
1977	9.8	74	707.0	22	11
1978	10.3	76	1,027.0	24	12
1979	10.0	68	1,005.0	22	15
1980	11.9*	68*	1,004.0*	23*	14*

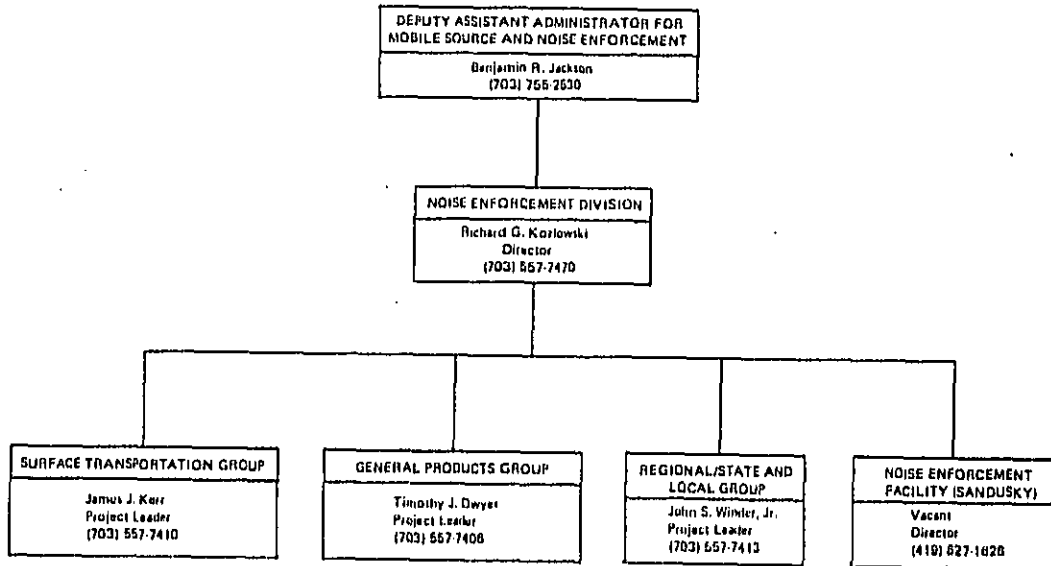
\*Recommended in the President's Budget Message to the Congress.  
 \*\*Dollar funding included with Office of Noise Abatement and Control.

## OFFICE OF NOISE ABATEMENT AND CONTROL ORGANIZATION CHART



OFFICE OF MOBILE SOURCE AND NOISE ENFORCEMENT

26



**EPA REGIONAL NOISE PROGRAM CHIEFS**

EPA Region	States	Address	Noise Representatives
I	Maine, N.H., Vt., Mass., R.I., Conn.	JFK Building Room 2113 Boston, Mass. 02203	Mr. Al Hicks (617/223-5708)
II	N.Y., N.J., P.R., V.I.	26 Federal Plaza Room 907G New York, N.Y. 10007	Mr. Tom O'Hare (212/264-2109)
III	Pa., Md., Del., W. Va., Va., D.C.	Curtis Building Room 225 6th & Walnut Sts. Philadelphia, Pa. 19106	Mr. Patrick Anderson (215/597-9118)
IV	N.C., S.C., Tenn., Ky., Miss., Ga., Fla., Al.	345 Courtland St., N.E. Atlanta, Ga. 30308	Dr. Kent Williams (404/881-4861)
V	Wisc., Ill., Mich., Ohio, Ind., Mn.	230 S. Dearborn Chicago, Ill. 60604	Mr. Horst Witschonke (312/353-2202)
VI	N. Mex., Okla., Ark., La., Tex.	1201 Elm St. Dallas, Tex. 75270	Mr. Mike Mendias (214/767-2742)
VII	Nebr., Kans., Iowa, Mo.	324 East 11th St. Room 1509 Kansas City, Mo. 64016	Mr. Vincent Smith (816/374-3307)
VIII	Mont., N. Dak., S. Dak., Wyo., Utah, Colo.	1860 Lincoln St. Suite 900 Denver, Colo. 80295	Mr. Paul Smith (303/337-2221)
IX	Calif., Nev., Ariz., Hawaii	215 Fremont St. San Francisco, Calif. 94105	Dr. Richard Procutner (415/556-4606)
X	Wash., Oreg., Idaho, Alaska	1200 Sixth Avenue Room 11C Seattle, Wash. 98101	Ms. Deborah Yamamoto (206/442-1253)

## NOISE DOCUMENTS

The following "noise" technical documents, unless otherwise noted, are for sale by the *National Technical Information Service (NTIS), U.S. Department of Commerce, 4213 13th Street, N.W., Room 620, Washington, D.C. 20004 (Phone: 202/296-4348)* or from the Superintendent of Documents, U.S. Government Printing Office (GPO), Washington, D.C. 20402 (Phone: 202/783-3238). Certain publications are available from the National Information Center for Quiet (NICQ), P.O. Box 57171, Washington, D.C. 20037.

The documents are grouped into the areas of:

- Reports to Congress
- Health and Welfare
- Noise Monitoring
- Surface Transportation
- Aviation
- Construction
- State and Local Noise control
- Federal Programs
- Household and Consumer Products
- Regional
- Other



TITLE	NTIS DOCUMENT NO.
<u>Reports to Congress</u>	
Report to the President and Congress on Noise - December 31, 1971	PB-206716
Report on Aircraft-Airport Noise (Senate Document 93-8) - August 1973	AVAILABLE AT GPO
First Report on Status and Progress of Noise Research and Control Programs in the Federal Government - June 1975	PB-243447/AS Vol. I PB-243448/AS Vol. II
<u>Health and Welfare</u>	
Noise from Industrial Plants December 1971	PB-206718
Community Noise - December 1971	PB-207124
Effects of Noise on Wildlife and Other Animals - December 1971	PB-206720
Effects of Noise on People December 1971	PB-206723
Social Impact of Noise December 1971	PB-206724
The Effects of Sonic Boom and Similar Impulsive Noise on Structures December 1971	PB-206725
Economic Impact of Noise December 1971	PB-206726
Relation Between Daily Noise Exposure and Hearing Loss Based on the Evaluation of 6,835 Industrial Noise Exposure Cases - June 1973	AD-767204

TITLE	NTIS DOCUMENT NO.
A Scientific Basis for Limiting Noise Exposure for Purposes of Hearing Conservation - July 19, 1973	AD-767274
Prediction of NIPTS Due to Continuous Noise Exposure - July 19, 1973	AD-767205
Public Health and Welfare Criteria for Noise - July 1973	PB-241000/AS
Proceedings of the International Congress on Noise as a Public Health Problem, Dubrovnik, Yugoslavia May 13-18, 1973	PB-241060/AS ALSO AVAILABLE AT EPA
Impact Characterization of Noise Including Implications of Identifying and Achieving Levels of Cumulative Noise Exposure July 1973	PB-224408/AS
Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety - March 1974	PB-239429/AS
Population Distribution of the United States as a Function of Outdoor Noise Level - June 1974	PB-235022/AS
Federal Noise Effects Research: FY73-FY75 March 1975	PB-241751/LK
Some Considerations in Choosing an Occupational Noise Exposure Regulation February 1976	PB-251408

TITLE	NTIS DOCUMENT NO.
Noise: A Health Problem* Noise at Work* Noise Around Our Homes* Noise and Its Measurement* Hear, Here* Noise and You* Think Quietly About Noise* Noise: A Challenge to Cities*	AVAILABLE AT THE NATIONAL INFORMA- TION CENTER FOR QUIET
Measures of Noise Level: Their Relative Accuracy in Predicting Objective and Subjective Response to Noise During Sleep - February 1977	AVAILABLE AT EPA
Economic and Social Impact of Occupational Noise Exposure Regulations - March 1977	PB-276593
Speech Levels in Various Noise Environments - May 1977	AVAILABLE AT EPA
Behavioral and Physiological Correlates of Varying Noise Environments June 1977	AVAILABLE AT EPA
The Urban Noise Survey August 1977	AVAILABLE AT EPA
Comparison of Various Methods for Predicting the Loudness and Acceptability of Noise - August 1977	AVAILABLE AT EPA
The Ability of Mildly Hearing Impaired Individuals to Discriminate Speech in Noise - January 1978	PB-280480/AS
Federal Noise Research in Noise Effects February 1978	PB-280335

\*Written especially for general public.

TITLE	NTIS DOCUMENT NO.
Protective Noise Levels (condensed version of "Levels" Document) November 1978	AVAILABLE AT EPA
A Critical Review of State and Federal Workers Compensation Programs for Occupational Hearing Loss (in preparation)	
Foreign Noise Research in Noise Effects January 1978	PB-279383/AS
Effects of Noise on Wildlife (in preparation)	
<u>Noise Monitoring</u>	
Fundamentals of Noise Measurement Rating Schemes, and Standards December 1971	PB-206727
Standards and Measurements Methods, Legislation and Enforcement Problems, San Francisco, California September, 27-29, 1971, Vol. IV*	AVAILABLE AT GPO
Evaluation of Commercial Integrating- Type Noise Exposure Meter December 1973	COM-74-104-77
The Design of a Low Cost Sound Level Meter - April 1974	AB-783808
Guidelines for Developing a Training Program in Noise Survey Techniques July 1975 (Office of Naval Research)	AD-A01667

\*Written especially for general public.

TITLE	NTIS DOCUMENT NO.
Guidelines the Development of Procedures for the Measurement of Sound Source Emission (in preparation)	
Procedures for Estimating Sound Power from Measurements of Sound Pressure July 1975 (NBS/NBSIR 75-652)	COM-75-11399
<u>Surface Transportation</u>	
Transportation Noise and Noise from Equipment Powered by Internal Combustion Engines - December 1971	PB-208660
Manufacturing and Transportation Noise (Highway & Air) - Chicago, Illinois July 28-29, 1971, Vol. II**	AVAILABLE AT GPO
Transportation Noise (rail and other); Urban Noise Problems and Social Behavior, New York, N.Y. October 28-29, 1971, Vol. VI**	AVAILABLE AT GPO
Background Document for Interstate Motor Carrier Noise Emission Regulations October 1974	PB-242554/AS
Environmental Noise Measurements on Interstate 57 During and After Truck Strike - June 1974 (USA Const. Engrg. Research Lab)	AVAILABLE AT EPA
Noise in Rail Transit Cars: Incremental Costs of Quieter Cars - June 1974	PB-234992/AS

\*Written especially for general public.  
\*\*EPA Public Hearings.

TITLE	NTIS DOCUMENT NO.
Federal Surface Vehicle Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-241887/LK
Federal Research, Development, and Demonstration Programs in Surface Transportation Noise – February 1978	AVAILABLE AT EPA
Passenger Noise Environments of Enclosed Transportation Systems June 1975	PB-245409/AS
Background Document for Railroad Noise Emission Standards – December 1975	PB-251713
Background Documents for Medium and Heavy Truck Noise Emission Regulations March 1976	AVAILABLE AT EPA
NPRM on Special Local Determinations (Sec. 17 & 18) and Guidelines for State and Local Governments on the Filing and Processing of Applications for Preemption Waiver Determinations – November 1976	AVAILABLE AT EPA
A Manual for the Review of Highway Noise Impact – June 1977	Being Processed by NTIS
Comparison of Highway Noise Prediction Models – June 1977	Being Processed by NTIS
Background Document for Proposed Regulation of Truck Mounted Solid Waste Compactor – August 1977	AVAILABLE AT EPA
Background Document for Proposed Bus Noise Regulation – September 1977	AVAILABLE AT EPA
Foreign Noise Research in Surface Transportation – December 1977	AVAILABLE AT EPA

TITLE	NTIS DOCUMENT NO.
Background Document for Proposed Motorcycle Regulation - March 1978	AVAILABLE AT EPA

Department of Transportation Federal Highway Administration: Noise Policy and Related Environmental Procedures July 1978	AVAILABLE AT EPA
---	------------------

Aviation

The Effects of Sonic Boom and Similar Impulsive Noise on Structures December 1971	PB-206725
---	-----------

Legal and Institutional Analysis of Aircraft and Airport Noise and Apportionment of Authority Between Federal, State, and Local Government - July 1973	PB-225149/4AS
---	---------------

Report on Operations Analysis Including Monitoring, Enforcement, Safety, and Cost - July 1973	PB-225150/2AS
---	---------------

Noise Source Abatement Technology and Cost Analysis Including Retrofitting July 1973	PB-224422/AS
--	--------------

Review and Analysis of Present and Planned FAA Noise Regulatory Actions and Their Consequences Regarding Aircraft and Air- port Operations - July 1973	PB-224405/AS
---	--------------

Military Aircraft and Airport Noise and Opportunities for Reduction Without Inhibition of Military Missions July 1973	PB-223637/AS
--	--------------

Noise Measurement of Concorde O2 Approach and Takeoff at Dallas, Ft. Worth and Dulles International Airports August 1974	PB-245156/AS
---	--------------

TITLE	NTIS DOCUMENT NO.
Civil Aviation Studies and Interagency Coordinating Organizations (Vol. I) December 1974	PB-239344/AS
Civil Aviation Studies and Interagency Coordinating Organizations (Vol. II) Appendices - December 1974	PB-239345/AS
Noise Certification Rule for Propeller Driven Small Airplanes, EPA Project Report November 1974	AVAILABLE AT EPA
Minimum Altitudes for Noise Abatement, EPA Project Report - November 1974	AVAILABLE AT EPA
Civil Subsonic Turbojet Engine-Powered Airplanes (Retrofit and Fleet Noise Level) EPA Project Report December 1974	AVAILABLE AT EPA
Aircraft Noise Certification Rule for Supersonic Civil Aircraft, EPA Project Report - January 1975	AVAILABLE AT EPA
Airport Noise Regulatory Process November 1976	AVAILABLE AT EPA
Federal Aircraft Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-244904/LK
Federal Research, Technology and Demonstration Programs in Aviation Noise March 1978	AVAILABLE AT EPA
Information on FAA Certification of Aircraft - January 1975	PB-242583/AS
National Measure of Aircraft Noise Impact Through the Year 2000 June 1975	PB-243522/AS



TITLE	NTIS DOCUMENT NO.
Noise Standards for Aircraft Type Certification (Modification to FAR Part 36) - August 1976	PB-262401/AS
Department of Defense: Air Installation Compatible Use Zones (AICUZ) Program April 1977	PB-271441/AS
Calculation of Day-Night Levels (L <sub>dn</sub> ) Resulting from Civil Aircraft Operations January 1977	PB-266165/AS
Airport Noise Abatement Planning June 1977	AVAILABLE AT EPA
Foreign Noise Research in Aviation December 1977	AVAILABLE AT EPA
Sound Exposure Levels (SEL) Chart for Civil Jet Transport Aircraft Takeoff Using ATA Procedures (adopted December 1976)	AVAILABLE AT EPA

Construction

Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances - December 1971	PB-206717
Construction Noise - Atlanta, Georgia July 8-9, 1971, Vol. 1*	PB-230064
Noise Emission Standards for Construction Equipment - Background Document for Portable Air Compressors - December 1975	PB-250430
Inflationary Impact Statement for Portable Air Compressors - December 1975	AVAILABLE AT EPA

\*EPA Public Hearings

TITLE	NTIS DOCUMENT NO.
Foreign Noise Research in Machinery/ Construction Equipment -- December 1977	AVAILABLE AT EPA
Federal Machinery Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-243523/LK
Federal Research, Development and Demonstration Programs in Machinery and Construction Noise -- February 1978	AVAILABLE AT EPA
Background Document for Proposed Wheel and Crawler Tractor Regulation July 1977	AVAILABLE AT EPA

State and Local Noise Control

Laws and Regulatory Schemes for Noise Abatement -- December 1971	PB-206719
State and Municipal Non-Occupational Programs -- December 1971	PB-208659
Urban Planning, Architectural Design, and Noise in the Home -- Dallas, Texas August 18-19, 1971, Vol. III*	PB-230065
Technology and Economics of Noise Control; National Problems and Their Relation with State and Local Programs, Washington, D.C. November 9-12, 1971, Vol. III*	AVAILABLE AT GPO
Case History of a Municipal Noise Control Program -- San Diego, California November 1978	AVAILABLE AT EPA
Noise Source Regulation in State and Local Noise Ordinances -- February 1975	PB-245158/AS
Model Community Noise Control Ordinance -- September 1975	AVAILABLE AT EPA

\*EPA Public Hearings.

TITLE	NTIS DOCUMENT NO.
State and Municipal Noise Control Activities, 1973-1974 -- January 1986	PB-251999
San Diego, California -- Case History of a Municipal Noise Control Program -- November 1978	AVAILABLE AT EPA
ECHO Brochure	AVAILABLE AT EPA
<u>Federal Programs</u>	
Summary of Noise Programs in the Federal Government -- December 1971	AVAILABLE AT GPO ONLY
First Report on Status and Progress of Noise Research and Control Programs in the Federal Government -- June 1975	PB-243447/AS, Vol. I PB-243448/AS, Vol. II
Federal Noise Effects Research: FY73-FY75 March 1975	PB-241751/LK
Federal Surface Vehicle Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-241887/LK
Federal Research, Development and Demonstration Programs in Surface Transportation Noise -- February 1978	AVAILABLE AT EPA
Federal Aircraft Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-244904/LK
Federal Research, Technology, and Demonstration Programs in Aviation Noise March 1978	AVAILABLE AT EPA
Federal Machinery Noise Research, Development, and Demonstration Programs: FY73-FY75	PB-243523/LK
Federal Research, Development, and Demonstration Programs in Machinery and Construction Noise -- February 1978	AVAILABLE AT EPA

TITLE	NTIS DOCUMENT NO.
Plan for Development of Voluntary Standards on Environmental Sound In Response to Federal Agencies' Needs (In preparation)	
An Assessment of the Federal Noise Research, Development and Demonstration Activities: FY73-FY75	PB-269298/AS
EPA Guidance for Inspection of Federal Facilities for Compliance with Noise Abatement Standards - December 1976	PB-269298/AS
Department of Housing and Urban Development: Noise Abatement and Control Policy - April 1977	PB-271655/AS
Department of Defense: Air Installation Compatible Use Zones (AICUZ) Program April 1977	PB-271441/AS
Department of Transportation Federal Highway Administration: Noise Policy and Related Environmental Procedures July 1978	AVAILABLE AT EPA
Federal Noise Research - EPA Summary and Assessment - June 1978	AVAILABLE AT EPA
Potential Effectiveness and Barriers Toward Reducing Highway Noise Exposure on a National Scale - July 1978	AVAILABLE AT EPA
Who's Who in Federal Noise Programs December 1977	AVAILABLE AT EPA
Construction Site Noise Impact February 1978	AVAILABLE AT EPA
Directory of Federal Laboratories and Research Facilities with Noise Capabilities (in preparation)	

TITLE

NTIS DOCUMENT NO.

Household and Consumer Products

Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances -- December 1971	PB-206717
Noise Around Our Homes*	AVAILABLE AT NICQ
Quieting in the Home*	AVAILABLE AT NICQ

Regional

Environmental Noise Assessment Waco, Texas Metropolitan Area April 5, 1974 (Region VI)	AVAILABLE AT EPA REGION VI -- DALLAS
Environmental Noise Monitoring at Three Sites in Irving, Texas February 1975 (Region VI)	PB-242567
Environmental Noise Assessment -- City of Grand Prairie, Texas, 1973 (Region VI -- Dallas)	AVAILABLE AT EPA REGION VI -- DALLAS
Environmental Noise Assessment Lawton, Oklahoma -- April 1976	AVAILABLE AT EPA REGION VI -- DALLAS
Environmental Noise Assessment Mountain View, Georgia -- July 1977	PB-271537
Techniques for Controlling Noise from Residential Heat Pumps December 1977	AVAILABLE AT EPA REGION X
Environmental Noise Assessment Hartsfield International Airport, Atlanta, Georgia -- September 1978	AVAILABLE AT EPA REGION IV

\*Written especially for the general public.

TITLE	NTIS DOCUMENT NO.
An Assessment of Noise Concern in Other Nations - December 1971	PB-206721 (Vol. I) PB-206722 (Vol. II)
Noise Programs of Professional/Industrial Organizational, Universities and Colleges - December 1971	PB-207125
Soviet Noise Research Literature from the F. F. Erisman Scientific Research Institute for Hygiene, Moscow, USSR April 1974	PB-235086/T
1976 Reassessment of Noise Concerns of Other Nations (Vol. I - Summary of Selected Topics)	PB-259923
1976 Reassessment of Noise Concerns of Other Nations (Vol. II - Country by Country Reviews)	PB-259924
University Noise Research Proceedings of EPA - University Noise Seminar October 18-20, 1976	PB-265114
Noise Research Technology Symposium Proceedings	To Be Published