

The Interest of the General Public in a National Noise Policy in the United States of America

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The soundscape of the United States has changed in the 30 years since the last attempt at establishing an effective National Noise Policy, the Noise Control Act of 1972. The last 30 years have seen a significant growth in environmental noise sources such as cars, trucks, motorcycles, and airplanes. In addition, new environmental noise sources continue to be invented. These “new” noise sources include jet skis, leaf blowers, car alarms, boom cars, jake brakes, boom boxes, etc. Also, sound systems with electronic amplification have become a dominant noise source in the last 30 years. These changes are part of the broader historical pattern of the second half of the previous century, most notably a growth in noise and a flight from urban areas to what were much quieter suburbs and rural areas (mostly for quality of life reasons such as less crime, better schools, quieter neighborhoods, etc.). Many of these suburbs, however, are no longer quiet as the noise has followed this migration. In the context of the evolving soundscape this paper examines 1) the segments of the public most concerned about noise, 2) the noises the public is most concerned about, and 3) what they want done about noise. In addition, developing a National Noise Policy also requires understanding two key changes that have taken place: 1) that the middle class and wealthy no longer can be certain of buying quiet and 2) that political support for noise control spans typical political divisions.

Overview

- **History of the Soundscape**
 - Early History
 - 20th Century
 - Fossil Fuel Era
 - Late 20th Century
- **Noise as a National Concern**
 - Who's Concerned
 - What Are They Concerned About
- **Noise Policy that is Responsive to the Public's Concern**

Themes

- Invention
- **Growth**
- **Spread**
 - Understanding Spread is Key to Understanding Public Support

History of the Soundscape Early History

- Epic of Gilgamesh, the earliest version of the Biblical flood story.
“The world bellowed like a wild bull, and the great god was aroused by the clamor. Enhil heard the clamor and he said to the gods council, ‘The uproar of mankind is intolerable and sleep is no longer possible by reason of the babel.’ So the gods agreed to exterminate mankind.”

History of the Soundscape Early History

- 2000 years ago Julius Caesar banned chariots from Rome's cobbled pavements late at night.

History of the Soundscape Industrial Revolution

- The Industrial Revolution changed the nature of noise from an intermittent occurrence to a constant presence.

History of the Soundscape 20th Century

“The City Improvement Society of New York reports that in 1899 a large majority of the whole number of complaints that were filed with it referred to one subject--noise; and this tendency, it says is becoming constantly more marked.”

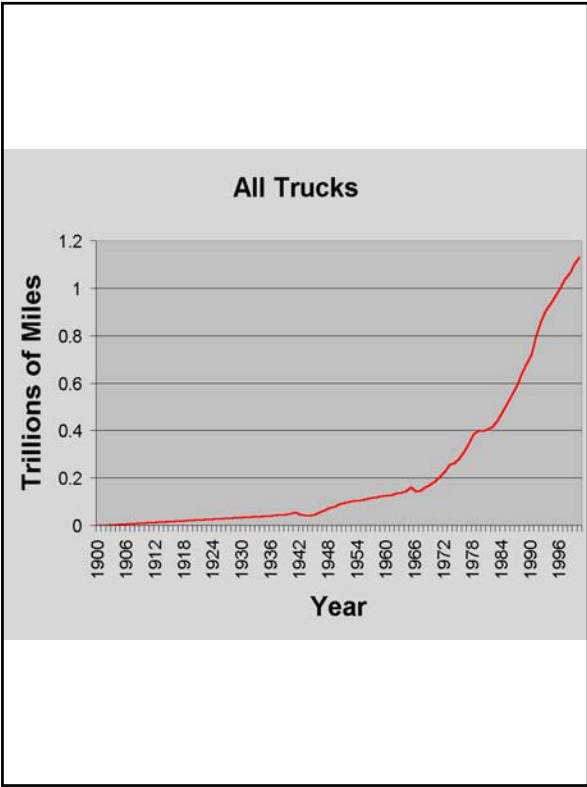
Charles Mulford Robinson, 1901,
The Improvement of Towns and Cities, 72-73.

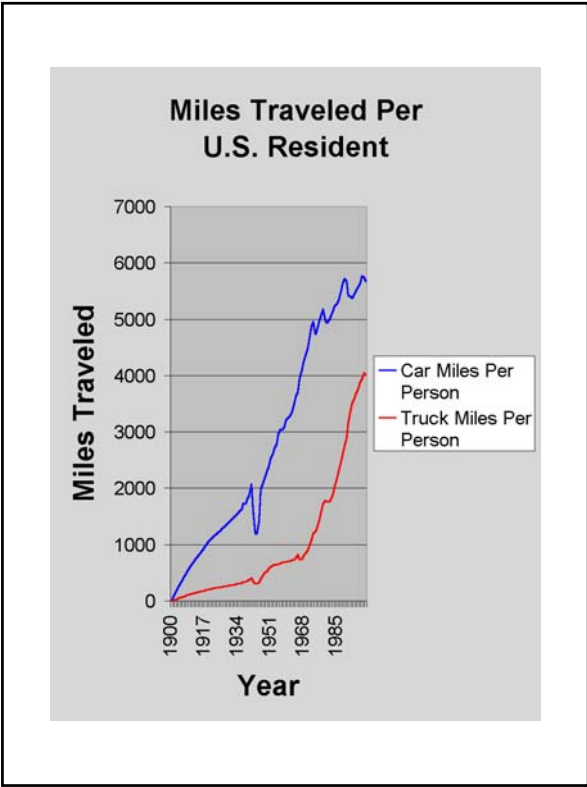
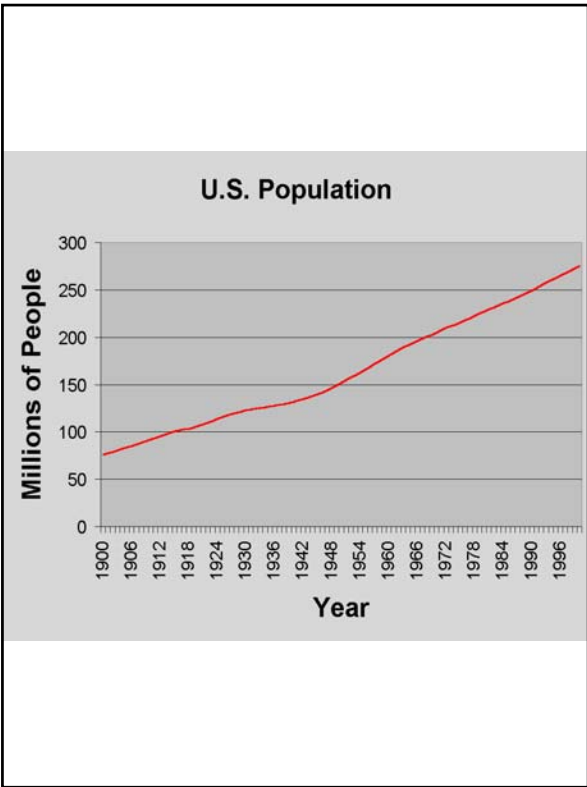
History of the Soundscape 20th Century

- The really big noise makers were 4 years away:
 - Kitty Hawk-1903
 - Ford Motor Company-1903
- Making a really big racket in the 20th century required burning fossil fuels.

History of the Soundscape 20th Century

- Graphs of 20th Century Growth in Noise





History of the Soundscape Last 30 Years

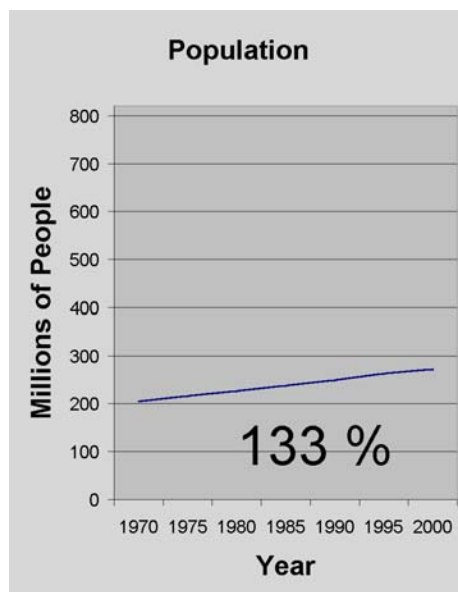
- Noise Control Act of 1972
 - “Noise presents a growing danger to the health and welfare of the Nation's population, particularly in urban areas.”
- EPA’s Office of Noise Abatement and Control Closed in 1981

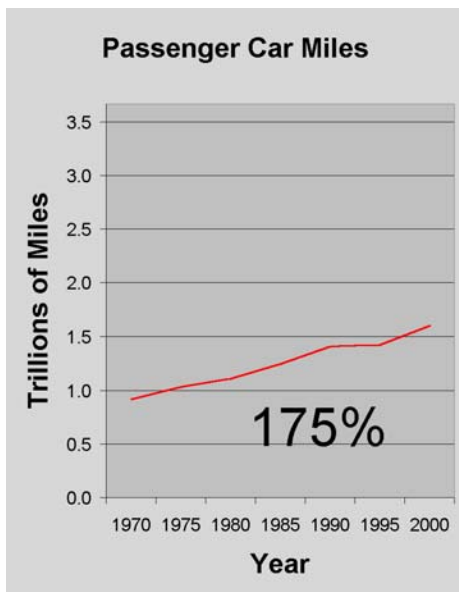
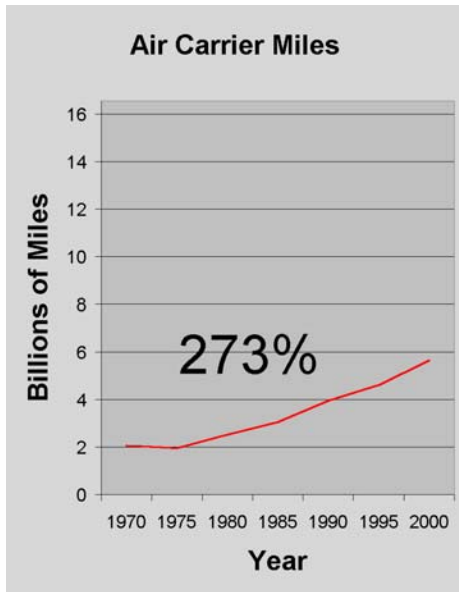
History of the Soundscape Last 30 Years

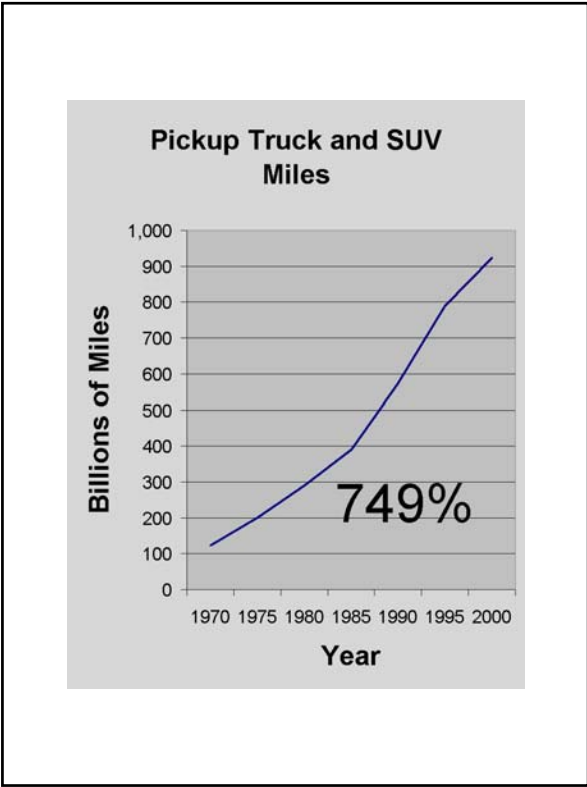
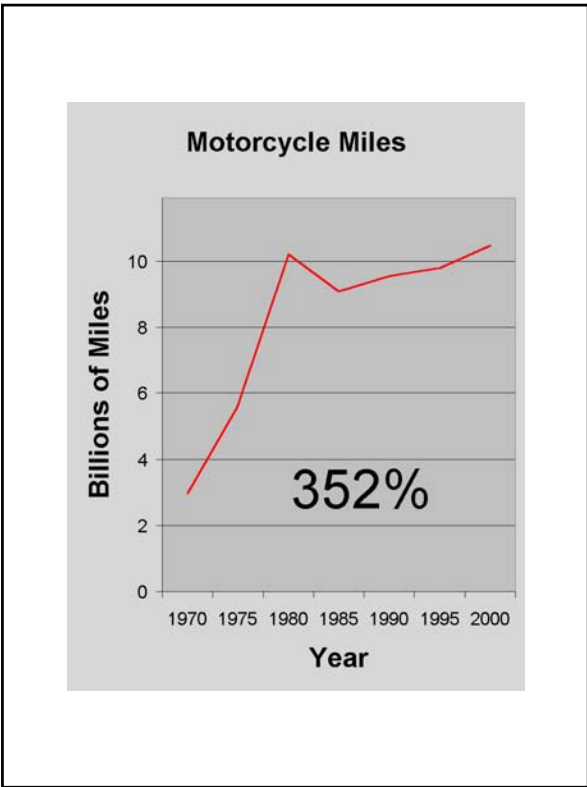
- When the Noise Control Act became law, the automobile and the plane were no longer unheard of and unheard noise sources. They had become the old and established ones.
- Their use continued to grow.

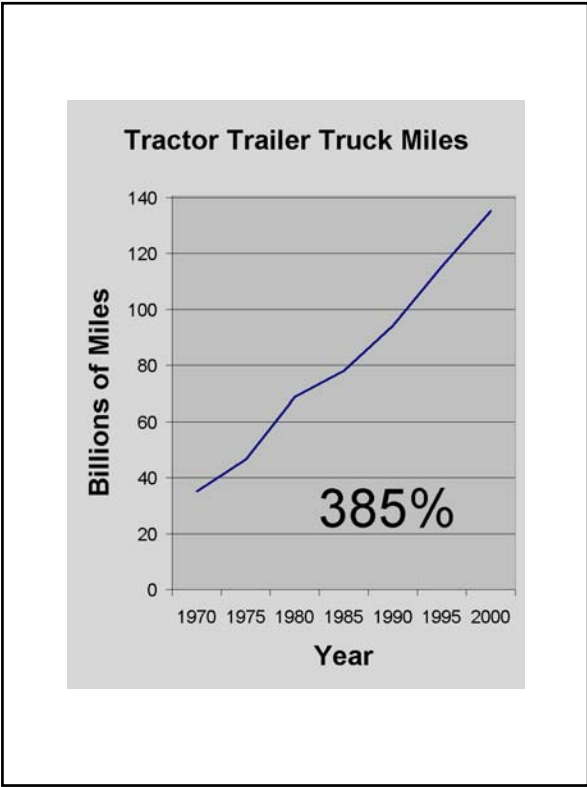
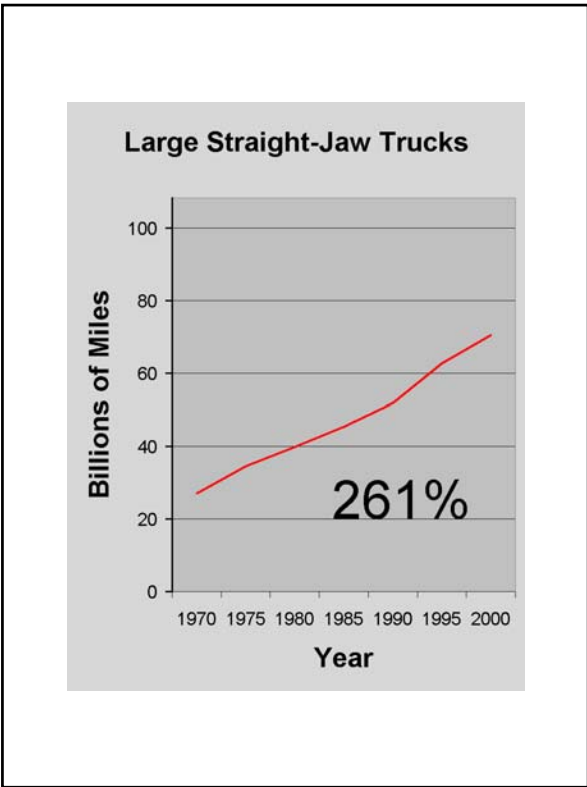
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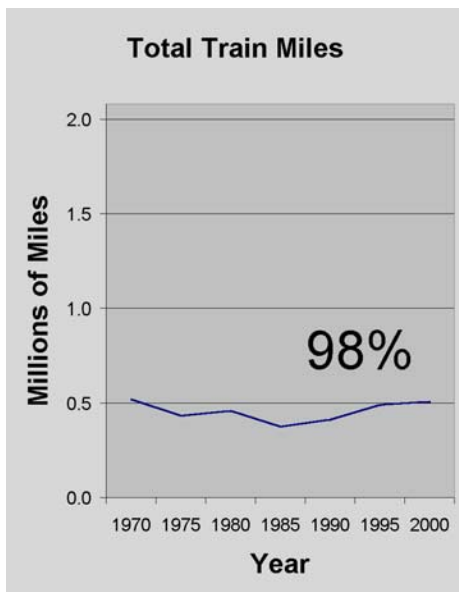
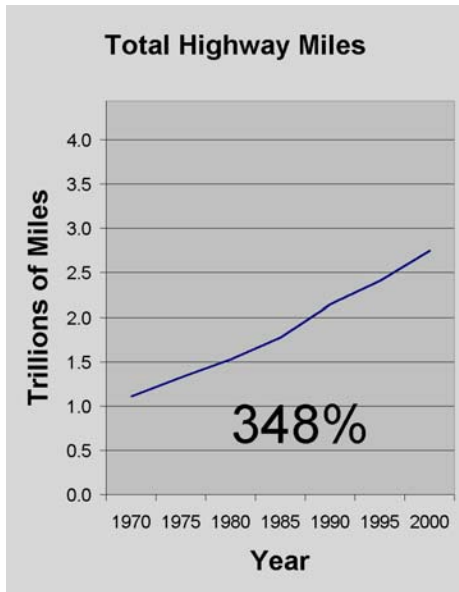
- Graphs of Last 30 Years











History of the Soundscape 30 Years of New Noises

New Noise Sources Invented:

- Jake brake—1961
- Leaf blower—1970s
- ATV—1970 (developed in Japan for utility reasons)
- Cigarette boats—1970 (name of racing boat and later manufacturing company)
- Weedwhacker—1971
- OSHA back-up beeper—1971
- Rug Doctor—1972

History of the Soundscape 30 Years of New Noises

- Jet Ski—1973
- Fed Ex—1973
- Cell phone—1973 (first patent for hand held mobile phone, Motorola) 1965 shoe phone Get Smart, 1966 Bat Phone
- Boom car—1975 (first component stereo system for automobiles)
- Commercial SST, Concorde—1976 (Commercial flight), 1971 (Mach 1)

History of the Soundscape

30 Years of New Noises

- Boom box—1981 (Webster's Dictionary)
- Power vented furnaces and water heaters—1982
- Internet Hotels—1990s
- Mufflers tunable to various cars—Late 1990s

History of the Soundscape

30 Years of New Noises

- Combined-cycle power plant
- Vacuum street sweeper
- Vacuum sewer sucker
- Front loading trash trucks
- Sonic dog, pet, and bug devices
- Skateboard parks
- Ocean Noise
- Recorded church bells and carillons
- Car alarm
- Cars that honk when locked

History of the Soundscape 20th Century Summary

- **Invention** of new noise sources.
- **Growth** in the quantity of those sources.
- **Spread** of those sources into previously quiet areas.
 - More about this shortly.

Noise as a National Concern

- It was the **growth** of noise which lead to the first National Noise Policy in 1972.
- It will probably be the **spread** of noise into previously peaceful areas that will lead to the next National Noise Policy.

Noise as a National Concern **Deja vu?**

Just as at the beginning of the 20th Century, by the end of the 20th Century, noise remained the number one quality of life complaint in New York City.

- Noise triggered 83% of the calls to the New York City Quality of Life Hotline in 2001

(Tierney, New York Times, January 15, 2002, Section B, Page 1).

Noise as a National Concern **What Changed?**

- Noise sources have evolved.
 - In New York City, industrial and manufacturing noise sources have declined.
 - Between 1955 and 1995, manufacturing employment in New York City declined by 70%.
 - Transportation related sources have increased.

Noise as a National Concern

What Changed?

- The greatest changes in the soundscape have occurred in suburban and rural areas.
 - The 20th Century movement of many people from urban to suburban areas.
 - Increase in population (200 million people).

Noise as a National Concern

What Changed?

- Since WWII, hopes for quieter neighborhoods, lower crime rates, and better schools have attracted more and more people to suburban and rural areas.

Noise as a National Concern What Changed?

- **They have taken the noise with them.**
 - Larger suburban lawns mean larger and noisier lawn equipment.
 - Greater suburban distances to work, shopping, etc. mean more and larger highways with more cars and more trucks all travelling at greater speeds.
 - As the population of the suburbs grew, there were more people using more noise sources.

Noise as a National Concern US Census Data

1975	1985	1995
1.Noise	1.People	1.People
2.Traffic	2.Noise	2.Noise
3.Poor Street Lighting	3.Traffic	3.Traffic
4.Crime	4.Litter or Housing Deterioration	4.Crime

US Census, Annual Housing Survey, 1975, Table A-4; American Housing Survey, 1985 and 1995, Table 2-8.
Note: A new category of neighborhood problems, specific people in the neighborhood, was added in the 1980s but was not present in the 1970s surveys.

Noise as a National Concern US Census Data

- Most Impacted by Noise
 - **Renters 2:1 Owners**
 - **Minorities**
 - **Poor**

Noise as a National Concern Environmental Justice

- The people most impacted by noise often do not have the political strength to significantly influence public policy.
- People with low incomes cannot employ noise consultants to solve problems.
- Environmental justice must be part of a national noise policy-- minorities or persons with low incomes should not bear a disproportionate noise burden.

Noise as a National Concern Suburbanization of the Noise Problem

- Public policy is most likely to be driven by:
 - The growing noise levels in **suburban, rural, and wilderness areas.**
 - The **middle class and wealthy people** who cannot buy a home in a quiet neighborhood with the confidence that it will remain quiet.

Noise as a National Concern Suburbanization of the Noise Problem

- Public support transcends typical political divisions.
 - Approximately half the funding for NPC comes from politically conservative sources.
 - People of all political parties find excessive noise bothersome.
 - More conservative suburbs and gated communities tend to have a great interest in noise and have some of the most restrictive noise regulations in the nation.

Noise as a National Concern
Support for a National
Noise Policy Summary

- Suburban, rural, and wilderness areas.
- Persons of all political parties.

Noise as a National Concern
Opposition to a
National Noise Policy

- Opposition also spans political divisions.
 - Persons leaning in the direction of less government regulation.
 - Individuals or groups with an interest in a particular noise source.

Noise as a National Concern
What Noises People
Are Concerned About.

Percentage of Calls to NPC	Noise Source
12.09	Airports and Airplanes
9.31	Highways
8.83	Industrial and Commercial
7.81	Stationary Amplified*
5.85	Boom Cars
4.26	Barking dogs
3.19	Automobile Racetracks
3.14	Construction

Noise as a National Concern
What Noises People
Are Concerned About.

3.04	Lawn Equipment
3.03	Rail
2.83	Off-road Vehicles and Snowmobiles
2.81	Motorcycles
2.54	Noise in Parks and Wilderness Areas
2.24	Outdoor Events*
2.12	Gun Clubs
1.94	Watercraft
1.90	Bars and Restaurants*

**Noise Policy Responsive to
the Public's Concern**
The Aviation Experience

- From the engineer's perspective:
 - Aviation noise is the best example of the success of quieter technology.
- From the public's perspective:
 - Aviation Noise is the best example of the failure of quieter technology.

**Noise Policy Responsive to
the Public's Concern**
**The Wilderness
Experience**

- The noise footprint of the quietest-technology snowmobiles is still greater than a mile on both sides of the trail.
- When the urban, industrial, or transportation soundscape meets the natural soundscape, the natural soundscape always loses. Noise always trumps natural quiet. Natural quiet never interferes with noise.

**Noise Policy Responsive to
the Public's Concern**

**The Wilderness
Experience**

- It is not just the noise level but also the presence of noise at all that is problematic in wildlands.
- With the loss of quiet in suburban and rural areas, there is
 - An ever-increasing demand for quiet natural soundscapes in wild and natural areas.
 - A decreasing supply of peace, quiet, and natural soundscapes.

**Noise Policy Responsive to the
Public's Concern**

**Reliance on
Technology—Summary**

- Technology alone is not sufficient.
- Quieter technology too often addresses newly invented noises only after they have become a significant problem.
- A national noise policy will need to be proactive and prevent the next invented noise from becoming a problem.
 - Consideration of the control of noise needs to be an integral part of the design cycle for new products.

**Noise Policy Responsive to
the Public's Concern**

What the Public Wants

- Quiet suburbs
- Housing stock with better sound insulation/isolation
- Better noise ordinances and better enforcement of noise ordinances
- Increased local control in regulating noisy public transportation facilities such as highways and airports
- Quieter trucks, motorcycles, highways and trains

**Noise Policy Responsive to
the Public's Concern**

What the Public Wants

- Quieter industrial plants and commercial buildings
- Quieter construction sites
- Protection of the soundscape of parks and wildlands
- Quieter products
- Noise labels or a way for consumers to know if an appliance is noisy or quiet before they buy it
- Resources and information concerning noise pollution

Noise Policy Responsive to the Public's Concern

Conclusions

- Much of the impetus for a national noise policy will come from people concerned about suburban, rural, and wilderness areas.
- The next “Noise Control Act” will not single out urban areas.
 - Urban areas will continue to demand attention.
 - Efforts to control sprawl will require more attractive urban areas and a better quality of life in high-density urban populations.

Noise Policy Responsive to the Public's Concern

Conclusions

- Environmental justice will increasingly influence policy and emphasize the need to ensure that minorities and the poor do not bear a disproportionate noise burden.

History of the Soundscape Evolving Attitude Toward Noise

- Pre-Industrial Revolution--
Quality.
 - Out of Tune, Out of Place.
- Early 20th Century--
Psychological Description.
 - Noise is Unwanted Sound.
- Late 20th Century--Pollution
 - Aural Liter.
 - Noise is to the Soundscape as the
McDonald's wrapper is to the
Landscape.

History of the Soundscape Evolving Attitude Toward Noise

“In Boston the city Music Commission is charged, among other things, with seeing that the hurdy-gurdies and hand-organs are in tune. Every year there is a solemn examination of all these instruments, when each applicant for a license plays his best. If his instrument is not in tune the license is withheld until the performer has made an attempt to remedy the trouble. Then he has a chance at another examination.”

Robinson, 1901, *The Improvement of Towns and Cities*

History of the Soundscape
Evolving Attitude
Toward Noise

“Among the most profound of these changes, between 1860 and 1930, was a change in the very notion of noise. Where before noise had been defined vaguely as the failure of certain tones to cohabit peacefully, and where before noise had been felt as something intermittent, soon it would be defined psychologically as unwanted sound and it would be felt as something constant. Modernity, it seemed, and seems, disturbs the peace.

History of the Soundscape
Evolving Attitude
Toward Noise

Large factories, steam locomotives, industrial whistles and bells, then the sewing machine and the phonograph, the machine shop and the telephone, the ringing cash register and the elevated train, the automobile and the subway, the truck and the machine gun, these were hardly epiphenomenal to modernity: they were of its essence. Whatever smoke and noise was raised, it was raised in the cause and career of an amazing progress.”

Hillel Schwartz

History of the Soundscape
Evolving Attitude
Toward Noise

- 1960's Awareness of Pollution
- Concept of Soundscape
- Comparison to Landscape
- NOISE AS AURAL LITER
– Other People's Waste that You
Don't Want in Your House, Yard,
or Public Space.