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CITIZEN'S POLICY GUIDE TO

ENVIRONMENTAL

PRIORITIES FOR FEB 3 1976

NEW YORK CITY

1974-1984

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A CITIZEN'S POLICY GUIDE
TO
ENVIRONMENTAL PRIORITIES
FOR
NEW YORK CITY
1974-1984

INTERIM REPORT

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THE COUNCIL ON THE ENVIRONMENT OF NEW YORK CITY

The Council is a broadly-based citizens' group affiliated with the Office of the Mayor and funded through voluntary contributions of individuals, organizations and corporations. In presenting this interim report of Environmental Priorities for New York City, 1974-1984, the Council wishes gratefully to acknowledge the contributions of members of its Executive Board and of literally hundreds of others in supplying priority statements, the basic task force labor, in reviewing and commenting on findings, and in volunteering their knowledge and views to assist us in reaching our goals. This publication is a distillation by the Executive Board of the work and the thinking of all contributors. It does not necessarily represent the views of any individual contributor nor of the Council task forces themselves, and we ask that those who do not see their own carefully presented views reflected here read the report with this in mind. Complete task force reports, supplemented with other useful outside opinion, will be forthcoming early in 1974. Readers who may wish to offer their views for consideration by our task forces are invited to do so through January 31, 1974.

The Council wishes particularly to express its sincerest appreciation to those foundations and corporations whose grants and contributions have supported the preparation of this interim report. They include: The Rockefeller Foundation, the IBM Foundation, the New York Telephone Company, the Mobil Foundation, the Reuben H. Donnelly Corporation, and Brooklyn Union Gas Co. They exercise no control over the project and bear no responsibility for its results.

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TASK FORCES

Special thanks are due the moderators of our task forces, whose willing determination to elicit the liberal attention and the best thinking of task force members is responsible for the progress to date on this study.

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"BEAR US COMPANY"

"You are about to show me shadows of the things that have not happened, but will happen in the time before us," Scrooge pursued. "Ghost of the Future!...I fear you more than any spectre I have seen. But as I know your promise is to do me good, and as I hope to live to be another man from what I was, I am prepared to bear you company...."--
A CHRISTMAS CAROL by Charles Dickens

The winter of 1973 in New York City is one during which New Yorkers might reflect intensely on Scrooge's vision. That we are facing a new way of life is apparent in more than the much-discussed worldwide fuel shortage. The City is faced with a number of overlapping environmental dangers, only one of which relates to the immediate shortages of clean fuels. There are other, longer-term environmental threats approaching, too. That is why the Council on the Environment of New York City, in late Summer, 1973, began this study of priority decisions that must be made soon by both citizens and leaders in New York. Neither the vision nor the language in our preliminary report is as sweeping as Dickens' was, though the implications are clear that we are facing major changes in the way we live.

New Yorkers have been well served over the past decade in matters of environmental protection: we have a regulatory and administrative structure to seek compliance with environmental laws--and we have the laws--that did not exist four years ago. Our air and surrounding waters are cleaner than before; our parks and streets are cleaner, better-lighted and better cared for. In general, questions of environmental protection and planning

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are now influences in all major decisions by government and business leaders. New Yorkers themselves are much better-informed and more conscious about the real importance of their environment and what can be done to improve it.

It has been several years since the concept of the environment burst upon the nation and the City and in a way many of the advances we have since recorded have brought about major changes in the nature of our environmental problems and in the ways they should be anticipated and met. It became apparent to the Council's Executive Board early in 1973 that Americans were seeing important and hard-won environmental progress lost through a number of organized attacks on the country's natural and environmental resources. The nature of the battle for environmental protection was changing and it seemed a good moment for a body like this to stand back, take stock and re-assess.

The Council on the Environment of New York City was established by Mayor John V. Lindsay in 1970 and was assigned by Executive Order of the Mayor to advise his office on environmental questions and serve as liaison with environmentally-concerned organizations and individuals concerned about making New York City more liveable. The Council has published other citizen research reports in the intervening years, notably studies of the economics of recycling and the effectiveness of the National Park Service programs in New York City, and is currently addressing resource recovery from waste oil in the metropolitan region, noise problems in schools, and the development

of effective block and tenant associations to facilitate neighborhood environmental care.

This booklet is a preliminary report to the public on the findings of our environmental priorities study, with recommendations on action or planning which should begin now in order to forestall "crisis" proportions in environmental problems which yet will confront us, in the words of one contributor, "as surely as the next tide will come in." Some are problems whose effects may be felt only in the long term; it is nevertheless urgent that we begin to confront them now.

Full reports from our Executive Board and from our present group of eight task forces will be published early in 1974, their findings supplemented by contributions from a broad cross-section of informed persons and organizations within and outside the City. Some 600 of these were asked to supply their views. Not every interested organization or individual could be included, simply because there are so many and the Council staff was limited in the time and manpower available to the study. The task forces themselves comprised varying numbers of recognized professionals and informed laymen from many social, educational and environmental groups, from business, the professions, government, and from various neighborhoods of the City. It is the Council's belief that the resulting reports were indeed typical and broadly representative.

Because the Council and its Executive Board believe that these deliberations provide an excellent profile of what New York citizens may rightfully and reasonably expect from their leaders and from protagonists on all sides of the environmental question,

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decision was made to offer this preliminary report in advance of the complete study. We believe it will be of interest to all reasonable persons living or working in New York City.

As citizen environmentalists, our contributors were not required to approach environmental problems from the standpoint of public budget managers, though they could not ignore the vicissitudes of public finance and the public and private economic impacts of the need to enhance environmental quality. Neither were they required to resolve the intricacies of bureaucratic politics within or among city, state or federal governments. They could, and did, we think, help simplify complexities and provide useful outside perspective to promote positive action and ease wasteful conflict. They were not required to embrace any particular established bureaucratic and administrative structure, program, or activity just because "that's the way we have always done it" or because it was somebody's pet platform. Yet, citizen environmentalists should not ignore efforts by public agencies that have proved to work well in enhancing environmental quality or conserving environmental resources.

The members of the Executive Board of the Council on the Environment are seeking a synthesis combining outside opinion and fact, offered in response to the Council on the Environment's query, with the best current thinking of our task forces, expressed as clearly as it is in our power to do. We urge readers to consider it as the work of intelligent and informed persons who share common concerns about the future of the quality of life in New York City.

The competency of this Council, by definition, is limited to considerations of the City environment. Thus, while acknowledging that New York City is faced also with myriad other priority decisions in housing, health, jobs, law enforcement, and education, we must leave discussion of these problems to other groups for other studies.

ENERGY RESOURCES AND ENVIRONMENTAL QUALITY

In its broad outlines, an energy policy can be formulated only by the federal government. In detail, however, the problems of energy supply and usage vary greatly from one region to another. Since the problems of New York City differ considerably from those of the nation as a whole, New York City should have an energy policy of its own. It is the responsibility of both the administration and the citizens of the City of New York not only to do everything within their own power to balance their energy requirements against the dangers of deterioration of the environment, but to make sure that their particular and special needs are taken into account in the formulation of state and national policy.

Energy, from its sources to its ultimate uses, is the cause of some of the most severe threats to the quality of our environment. Abundant, readily available, and reasonably priced energy is essential to our western industrial society. The truth of these statements has never been more clearly evident than today. Both the immediate fuel crisis and the growing pressures to convert to alternative, more polluting fuels, because of world-wide shortages of clean fuels, are giving rise to major environmental problems in New York City. Faced with this, the United States is belatedly trying to develop an energy policy.

We make no claim to uniqueness or originality for most of our recommendations. The recently published Third Annual Report of the Mayor's Interdepartmental Committee on Public Utilities presents a praiseworthy record of accomplishments as well as recommendations for further action. Our principal concern in this particular report is with environmental impact and we have tried to point out the interconnection of the immediate and the longer range problems. The range of activities and interests represented by the members of the Executive Board of the Council has made possible a comprehensive discussion of the trade-offs that may be required to achieve both an adequate supply of energy and a healthful and pleasant environment.

A brief discussion of the nature of the problems and possible solutions is essential to an understanding of both the intent and content of these recommendations. We shall consider the problems under three separate but related aspects:

- (1) sources of energy, (2) transport and storage of energy,
- (3) usage of energy and reduction of demand.

SOURCES OF ENERGY

The sources of energy most desirable at the present time, namely natural gas and liquid hydrocarbons, are depletable resources. The time when the world-wide rate of discovery of new reserves will drop below the rate of consumption must now be measured in decades rather than in centuries. For the United States itself, this point may already have been reached. For coal and shale oil, especially in the United States, the

the prospect is more favorable. The known reserves appear to be adequate to satisfy our national needs for several centuries. Uranium is also a depletable resource but developing technologies give us greater confidence that in the long run mankind will not perish for lack of energy.

We must make sure, however, that mankind does not perish from the by-products of the production of usable energy. Fortunately, the federal government appears to have recognized the nature of the problems and is proposing to support a long range research and development program designed to make sure that our energy reserves can be utilized economically, safely, and with full regard to environmental protection.

The current energy crisis, therefore, is not one of fuel reserves. The immediate severity of the crisis, caused by the embargo on oil exports by the Arab States, is a preview of what we will have to anticipate in milder form as the world's resources of natural gas and petroleum begin to diminish. This crisis, painful as its effects may be, is in some respects beneficial. It forces us to begin at once to take measures that we might be reluctant to take if the decline in availability of fuel were to follow a more gradual course towards ultimate depletion.

The United States, with its large reserves of coal and shale, is in a more fortunate position than some other parts of the industrialized world. In order to achieve national self-sufficiency, it will be necessary to use all our potential sources of energy. It is our opinion that for some time to

come the environmental hazards involved in the production of natural gas and petroleum are less than those which would be encountered in a rapid switch-back to coal. The sooner New York City can decide on necessary precautions--likely to be more stringent than any now in widespread application--against pollution from nearby oil production and refining, the more likely such precautions will be undertaken. A completely negative or passive position will give the City no chance to have its vital environmental needs taken into account.

This rather optimistic view of long range energy supplies does not diminish the intensity or severity of the current crisis, nor does it eliminate the need to act quickly. On the contrary, any optimism is based on the assumption that we can act promptly and that the measures we take will eliminate or reduce the intensity of future crises. Whether one blames the Arabs, the oil companies, the environmentalists, the economic system or "Washington," the fact remains that there is a real shortage of available gas, oil, and coal in this country. Only equitable allocations of available supplies and economies in the use of energy will see us through the present emergency. It is with respect to allocation that the differing needs of different geographic areas become apparent. Allocation can not be simply an equitable distribution of the total quantity of fuel available. The environmental effects of the more polluting fuels, such as coal or high-sulfur fuel oils, are much more serious in New York City than in other regions.

There are many advantages and disadvantages to city life, but in one respect the very large city is superior to other forms of habitation--its energy efficiency. The report Patterns of Energy Consumption in the Greater New York Area, by the Regional Plan Association and Resources for the Future, Inc. shows that New York City has a per capita consumption of energy 45% below the U.S. average, even though income per capita is higher than the national average. In fact, per dollar of money income, energy consumption in New York City is less than half the national figure.

Unfortunately, the high density which makes possible this efficiency also aggravates the effects of pollutants. The great improvement in the air quality of New York City over the past few years has been made possible only by banning the use of fuels with high sulfur and ash content. The effects on rural communities and small cities are much less, and strong efforts should be made to convince Washington leaders that allocation should take into account fuel quality as well as quantity and that relaxation of emission standards should be done carefully, case by case.

We have one final comment on sources of energy. If the wastes of the City could be used as fuel, it would alleviate both our energy needs and our waste disposal problems. The City and Con Edison are already investigating this possibility and we believe the pilot initiative should be expanded as soon as possible.

TRANSPORT & STORAGE

As far as the immediate fuel shortage is concerned, little can be done to help through changes or innovations in transport or storage. From the longer term point of view, the need for new transport and storage facilities will depend very much on where the needed supplies will come from. If imported oil is to be relied on, supertanker ports and perhaps large capacity storage farms would be desirable, the former because there would be less danger of marine pollution than from a multitude of small tankers, the latter to protect ourselves from disruptions in supplies.

If oil and gas in large amounts are found on the outer continental shelf, neither superports nor storage would be necessary.

In the long term, it is almost certain that coal will be called upon to displace oil as the major fuel for stationary energy usages. Every effort should be made to preserve the network of railroads which connect New York City with the rest of the continent.

REDUCTION OF DEMAND

It is obvious that the quickest way to react to the current shortage of energy supplies is to reduce the use of energy. President Nixon has already asked for voluntary reduction of heating and gasoline usage and has asked the Congress for legal authority to make these and other reductions mandatory rather than optional. The President's requests do not meet the needs of New York City and some of our recommendations are for

more drastic moves. Some of these are already being considered and we wish only to add our voice in support.

Another obvious way to relieve the shortage is to permit the use of more polluting fuels. This, we think, should be resisted as long as there is the possibility that proper regional allocation on the basis of quality needs could reduce New York City's pollution load without adding undesirably to the loads of others.

Many of the measures we propose for the reduction in energy consumption will not give immediate results. The present crisis does give the incentive for, and puts the public in the mood to accept, modifications in life-style and ways of doing things which would greatly reduce wasteful and unnecessary use of energy. The current emergency may end but the long term prospect is quite definitely for increasing costs of energy. Anything we can start now to reduce the energy we consume in our lives and our work will help to make possible not only a more sound economy but a better environment.

FINDINGS AND RECOMMENDATIONS

The most effective measures to reduce both the severity of the current fuel supply crisis and its environmental impact are those which would quickly lessen consumption of energy. Many of these measures, if retained after the crisis, will reduce the severity of future problems.

Even if efforts to lower consumption are successful, it is probable that more polluting fuel will be needed for the City.

It is important that the unique problems of New York City be called to the attention of those who will be responsible for fuel allocations.

The announced national policy for self-sufficiency in fuel might demand a reconsideration of local objections to some proposed methods of achieving such self-sufficiency: drilling on the outer continental shelf, additional refining and long-term storage capacity, provided stringent environmental standards are observed.

- 1. Support fully and emphatically all federal proposals for conserving energy unless they clearly interfere with essential services. Inhibit excessive energy consumption by automobiles through regulation, taxes, tolls, taxi cruising bans and other sanctions and improve operation and maintenance of mass transit facilities. (See the Transportation section of this report.)*
- 2. Oppose efforts to grant unnecessary variances to the Clean Air Act, and lobby for national allocation of clean fuels to high population-density areas.*
- 3. Conduct energy use inventories of all major structures and all electrical appliances; discourage or restrict sale and use of such excessive energy-consuming products as inefficient air conditioners and "frost-free" refrigerators.*

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4. *Use the City's purchasing power to encourage manufacture of energy-efficient products and vehicles, and use the vehicle fleets owned or controlled by the City as examples to encourage other fleet owners to conserve energy.*
5. *Implement plans, like those of the Public Service Commission, to alter electric and gas rate structures so as to eliminate quantity discounts and otherwise discourage consumption.*
6. *Develop the use of solid waste, sewage sludge, and waste oil for fuel, where no higher level of use (e.g., metals from solid waste) can be found. (See Resource Recovery section.)*
7. *Enforce regulations that prevent the illegal disposal of waste oils. Establish requirements that waste oils be collected and processed for use as fuel and other petroleum products.*
8. *Require energy impact assessments before any major new construction or other important project, including vehicle fleet purchase, can be undertaken.*
9. *Mandate energy-conserving design, maintenance, operation and construction of buildings.*
10. *The City should take the lead in investigating the problems and benefits associated with offshore*

*exploration for oil and gas deposits, with
superport construction and use, and refinery
construction and other onshore developments
related to these facilities.*

11. *Develop unique alternative energy sources.*

TRANSPORTATION

Millions of people have come together to live and work in the geographically small place called New York City and though things are concentrated, they are still not so close that people can walk everywhere they must go. The movement of these people and their goods in and about the City becomes a major undertaking.

One of the benefits of the dense development of this urban area is that mass transit becomes feasible. The City's 237-mile subway system, the largest in the country, is a cheap, fast, low polluting, and energy-efficient method of travel. Unfortunately, it is also dirty, congested, crime-ridden, noisy, uncomfortable, and continually subject to fare increases.

At their peak in 1947, the City's subways carried 2.05 billion passengers, at 5¢ a ride. In 1972, they carried 1.172 billion at 35¢ each. Unfortunately, whenever ridership has declined, the number of operating trains has been reduced, so remaining passengers have not benefited from reduced subway congestion.

The threatened increase in subway fares from the current 35¢ to 60¢ or more is a portent of environmental disaster because it would certainly lead to even greater auto use and air pollution, as well as further energy shortages. Keeping the fare as low as possible is an urgent environmental priority for the City, and a battle whose outcome will soon be known.

Lack of routes is not the most serious subway problem, now that the Second Avenue subway and smaller lines are under construction. In addition to the present construction, the existing subway system must be rehabilitated to make it more attractive to current riders as well as to current auto users. Provision of more cars that are more comfortable, air conditioned, and quieter, designed with rush hours more clearly in mind, along with improved police protection and better cleaning and maintenance, will go a long way in this direction.

In many parts of the region, unfortunately, only the automobile is adequate for transportation. The automobile, with its servants -- highways, gasoline, etc. -- has a multitude of environmentally destructive impacts. The automobile and the mobile society have grown up together and are now to a large degree interdependent; only a massive change in our institutional and physical structures would significantly reduce our dependence on the car.

The total transportation order in the City -- the network of vehicles, roadways, tracks, fuel supply, and other physical support mechanisms, and their patterns of use -- includes among its adverse effects on life in the City:

-- Pollution. Transportation of people and goods accounts for roughly 95% of the carbon monoxide emissions, 65% of the hydrocarbons, 40% of the nitrogen oxides, and 15% of the particulates in the City's air, as well as significant doses of toxic heavy metals. Additionally, waste oil causes serious water pollution problems.

-- Energy. Nearly one-third of the energy used in the metropolitan area is consumed by transportation. Of all forms of transportation, except for the airplane, the urban automobile uses by far the most energy per passenger mile.

-- Land. Even in so tightly packed a place as Manhattan's Central Business District (the area between 59th Street and the Battery), where land values and the need for new land are among the highest in the world, 37% of the land is given over to streets and parking. The automobile uses much more land per passenger mile than any other common form of transportation.

-- Noise. Transportation, mainly subways, horn blowing, and trucks, provides the source of most complaints about noise in this noisy city. Noise has been shown to be a pollutant with health effects often as severe in their own ways as those of dirty air and water. (See this report's Noise section for further discussion.)

With the wide variation of origins and destinations, times of travel and numbers of people and amounts and types of goods on the move, no one mode of transportation will do the entire job. Even if we could know the ideal vehicle mix, our options for implementing it would be severely limited.

Of the limiting factors, probably the most fundamental is the pattern of land use in the metropolitan area. There is little point and even less economy in running a subway line through a place which will only generate a few riders an hour. Though all of Manhattan is densely enough developed to support

subways, many outlying areas in the other boroughs and most places beyond the City limits, are so sparsely developed that only the automobile offers feasible transportation. These areas have often been designed so that homes, shopping centers and factories cannot be reached easily without a car. Better transportation to the central city must be devised. At the very least, this involves requiring the use of satellite parking lots at mass transit connections.

Another impediment to City action to change transportation patterns is public unwillingness to switch from the auto to mass transit. Unfortunately, the easiest way to change travel patterns is apparently to increase fares, which significantly reduces mass transit use; this is the opposite of what is desired. Mandatory controls of various sorts will certainly be needed unless we reduce fares; in an era when higher fares are being seriously discussed, that seems at first glance a fanciful proposition, but it is being done successfully in other cities and, with sufficient ingenuity and work in finding subsidy money, it could be done in New York.

The State Comptroller suggests that hundreds of millions of dollars are available from the State's current operating budget. Without drastically re-ordering other social priorities it should be possible to find adequate sources of subsidy without special bond funds.

Now that we have spelled out the basic transportation dilemma -- shifting away from the automobile toward mass transit -- we will mention each important mode of transportation in turn. (Subways have already been discussed.)

-- Automobiles. Between 1947 and 1972, the number of people traveling by subway dropped by nearly half and the number of cars in the city increased; for example, during the same period the number of vehicles crossing the Hudson River bridges and tunnels soared from 44 million to 159 million, at a constant toll of 50¢. The gears are in motion to produce a cleaner, less-polluting automobile. In a few years, pollution-reducing catalytic converters will apparently be standard equipment on all American cars. These converters, unfortunately, themselves emit sulfates and trace metals. More testing on this problem is needed but once that is completed implementation could proceed rapidly. Unfortunately, catalysts reduce fuel economy and significant trade-offs are required between energy and environmental considerations. City-owned and licensed fleets of cars, such as police cars and taxis, provide ideal opportunities for large scale demonstrations of more efficient combustion and pollution control systems.

Though vehicle turnover will eventually mean that all cars will have cleaner systems, the process is not fast enough and installation of emission control devices on older cars, called "retrofitting," may be needed, if appropriate devices can be produced. The City will also have to train more mechanics and inspectors, without whom requirements for pollution control devices will be ineffectual.

Measures must be taken to make it more difficult or more expensive to drive a car in or into Manhattan, where both pollution and congestion are worst. Among possible techniques are the following:

-- Tolls on all bridges to Manhattan would both reduce traffic and generate millions of dollars. Bridge tolls, on the other hand, raise serious equity problems because they would fall hardest on the poor.

-- Requirements to make tolls on all bridges and tunnels into Manhattan's Central Business District reflect occupancy of the car and vary with the hour of the day, to reduce rush hour demand.

-- Restrictions on parking. Change the zoning and tax laws to discourage garages which are not used anywhere near capacity anyway. Eliminate all on-street parking in midtown and enforce the laws thoroughly and consistently. Fewer people would use their cars in Manhattan if they knew they could park only with great difficulty.

-- Bans on taxi cruising in midtown Manhattan. Taxis contribute a major portion of congestion and pollution and more than half the taxis driving in midtown are empty. More taxi stands, a ban on cruising and cab sharing would be minor inconveniences to New Yorkers.

-- Buses. Though they are the slowest form of urban travel -- averaging about four miles per hour -- buses are among the most efficient. In midtown Manhattan during mid-

22.

day, they cover only 3% of the vehicle miles but provide 38% of the person miles of travel; the average bus, during those hours, has 25 passengers, compared to 1.3 for autos and .88 for taxis.

To encourage bus and subway travel, the inconsistent system of double fares must be changed. Somewhere between one-quarter and one-half of all commuters in the metropolitan region must take both a subway and a bus, or two buses, to get to work; some pay one fare, some two, without any real pattern.

To improve travel time, the city needs more buses making fewer stops. Other measures to improve bus service include expanding the program of building new bus terminals and shelters; working with the federal government and with manufacturers to insure that there is no shortage in new buses; experimenting with "minibuses" on less-traveled routes; retrofitting buses with pollution control devices, and establishing better maintenance and inspection programs.

-- Trucks. Only one-fifth of all midtown traffic is contributed by trucks but a much greater proportion of the vehicle pollution, congestion, and noise is caused by trucks. Much of the problem is caused by an essentially irrational system of goods delivery in the city, which might be improved by careful planning.

Much of the truck traffic in Manhattan is merely thru-traffic between New Jersey and Long Island and Connecticut. Either peripheral roads or a deep tunnel would solve this problem. Changes in Interstate Commerce Commission routing

regulations could keep much truck traffic out of the city by eliminating unnecessary routing of trucks through New York, a common practice now. Eventually, means should be found to reduce the use of trucks themselves. Finally, much closer attention should go to emissions from individual trucks and pollution control devices on new trucks. Inspection and maintenance can be of significant help here.

-- Railroads. Action must be taken before the passenger railroad goes the way of the horse and buggy. Trains are very efficient and environmentally sound, and they have the added advantage of an already existing extensive set of tracks. A few new routes are needed and some are now under construction or planned. But the immediate priority is to preserve the existing Penn Central tracks, which should come into increasing use in transporting people and goods.

-- Airplanes. The metropolitan area may not need a fourth jetport. Further study and community consultation are needed to determine whether the leading contender as the new site, Stewart Field in Orange County, can be upgraded to a jetport with acceptably low environmental disruption. Meanwhile, Stewart Field can be expanded as an alternate landing place; but the relatively short lead-time in converting it to a jetport, and the likelihood of fuel shortages cutting back on air travel, mean the City and state can afford to wait before a final decision is made.

At existing jetports, to save fuel, jets should be prohibited from starting and idling their engines until they are cleared for immediate take-off.

-- Bicycling and Walking. These two methods have, of course, the maximum beneficial effects on the traveler with the least adverse effect on everyone else and areas for walking and bicycling, with as few hazards from cars and congestion as possible, should be expanded in the City. Pedestrian malls and bikeways are methods which require small capital expenditures but add considerably to the quality of urban life.

FINDINGS AND RECOMMENDATIONS

If current trends toward greater reliance on the automobile continue, the quality of life in the City will continue to be in jeopardy. Automobiles must be sharply curtailed and mass transit systems upgraded.

New York City and New York State have already agreed to implement a far-reaching set of transportation controls mandated and approved by the U.S. Environmental Protection Agency. The next City administration will have to live with these controls and very serious thought should be given before they are tampered with. If they are closely followed, the City should be in a good transportation position; otherwise, real trouble portends unless effective adjustments can be found that are acceptable to both the state and federal governments.

In consonance with the federal EPA plan and with our own findings, implementation of the following proposals should begin immediately. Some will have short-term effects and others will not be felt for several years but work on all must begin now.

Automobiles

1. Discourage automobile use by banning midtown Manhattan taxi cruising; tolling more bridges and tunnels into Manhattan, and making the toll structure discourage peak traffic and encourage car pools; and restrict parking in Manhattan.
2. Use taxis, police cars and other City-controlled fleets for large-scale demonstrations of pollution control systems.
3. Restrict large automobiles and engines to reduce gasoline consumption, beginning with taxis and City-controlled fleets.
4. Train mechanics and inspectors for all motor vehicles.

Subways and Buses

1. Undertake a full-scale, completely new look at the funding of mass transit. Continue to search for subsidy money to minimize subway and bus fares.
2. Require accountability and disclosure of Metropolitan Transit Authority and Port Authority procedures and problems to the City Administration.
3. Hasten installation of new, more comfortable subway cars and buses; improve maintenance and appearance of existing fleets.

4. *Increase the number of rush hour trains and extend rush hour coverage.*

Trucks and Trains

1. *Rationalize goods delivery systems to reduce unnecessary truck traffic.*
2. *Find acceptable truck bypass systems to reduce unnecessary truck travel through Manhattan's Central Business District perhaps by providing toll incentives for trucks to use certain routes.*
3. *Retrofit trucks and buses with pollution and noise control devices, when they become available, and mandate effective devices on all new trucks.*

General and Miscellaneous

1. *Encourage land development throughout the metropolitan area in densities which will permit mass transit use.*
2. *Carefully study the need for and environmental impact of a fourth jetport.*
3. *Expand the City's system of bikeways and pedestrian areas.*

WASTES - RECOVERY AND DISPOSAL

In New York City materials are used to provide convenience and satisfy desires for goods by individuals, businesses, industries and institutions, including government. The use of materials creates waste, both in production processes and in consumption. Rough estimates indicate that the New York region is currently generating solid wastes at the rate of approximately 50,000 tons per day, of which approximately 30,000 tons are attributable to New York City alone. For the period 1962 through 1972, there was a 50% increase (4.6% per year) in collections by the City of New York Department of Sanitation and receipts of refuse by City disposal facilities. Projecting on the basis of a conservative 3.0% rate of growth, by the year 1985, New York City will have to handle approximately 55,600 tons of solid waste per day. Several disposal options present themselves.

Landfills available for New York City's general use will expire between 1985 and 1990, for construction wastes the City EPA now claims 1975. It appears there are no new sites available on land within the limits of the City and alternatives in New Jersey appear virtually closed to City use. The City should now make a firm commitment to the inevitable, a constructive and comprehensive resource recovery system, coupled with fills for otherwise unrecoverable materials.

For present or new incinerators to meet air quality control requirements, substantial remedial or preventive measures are required at considerable expense. It is unlikely that conventional incinerators could be expanded, given siting difficulties involved.

Ocean dumping in restricted areas is currently employed for some sludge from sewage treatment plants. Loose garbage is not dumped. The economic, engineering, and ecological prospects of dumping baled, compressed solid wastes are not well understood, but might provide some future possibilities -- taking due cognizance of federal regulations and international treaty obligations on ocean dumping.

It was evident in the inputs to this study that a broad consensus in favor of resource recovery exists within the metropolitan region. While the volume of waste actually recovered remains small, the momentum of growing numbers of people helping to recycle should not be ignored and should be capitalized upon by policy makers. There is growing experience within the City Administration and within local institutions, such as the Port Authority, in making available post-user waste in a form that can compete to some extent in the marketplace. Curbside collection of separated newspapers is expanding rapidly in residential neighborhoods.

The reason for minimal materials recovery is simple. It does not yet pay. The economics of waste collection, sorting, reprocessing and marketing of recycled materials are such that little incentive exists for disposal by the recovery process.

There are clearly four ways to increase the output of recycled materials or, what is the same thing, the input of waste into recycling operations: (a) Reduce the cost of recovery and transport to a level no higher than corresponding costs of alternative collection, transportation and disposal measures. (b) Reduce the cost of sorting, a prerequisite to materials recovery. (c) Reduce the

cost of processing and storage within the materials recovery plant itself. (d) Improve the ratio of the price of recovered materials in comparison with virgin materials.

These elements, considered from a purely economic standpoint, are the principal determinants of the incentive to recycle. They do not, however, take into account the environmental damage resulting from materials that are uncollected and materials that are disposed of in other ways. The environmental costs incurred by society in either of these areas must enter into the economic equation and a great deal of research is required in each of these areas, particularly on the nature and trends of markets for recycled materials.

There are several requirements for efficiency with respect to resource recovery. Some are economic, as indicated above, dealing with the continued feasibility of marketing the items recovered from the waste stream. Other efficiency criteria deal with environmental desirability and trade-offs between one form of environmental impact and another, such as the air pollutants released by burning organics in an energy recovery process versus waste water pollution when recycling organics to reclaim cellulose fibers for paper products.

The meshing of partial resource recovery efforts into an overall systems approach is essential. Here we must deal with problems of scale and priorities for public investment allocations. An additional problem in promoting more efficient resource recovery and disposal is the problem of contracting constraints imposed upon the City of New York by established legal or administrative

procedures that impede collaboration and risk sharing with enterprises possessing new technologies and systems. These should be changed promptly.

New Yorkers must be prepared to use more effectively everything from packaging to construction materials. Our industry, commerce, institutions and agencies must strive to reduce waste and to re-use materials whenever possible. Government should set the example by its own actions. Recycling should be promoted in every way possible. We can not wait for Washington to lead the way except in the case of certain national standards for the use of materials. Standardizing containers and packaging to promote recycling might well occur as part of a national conversion to the metric system.

Volunteer citizen recycling must be encouraged and supported by public collection services, especially with respect to the curbside collection of newspapers in residential neighborhoods. The public and private sanitation systems' overall incentives, however, continue to accent waste disposal -- not resource recovery, and this needs to change. Institutions and businesses must continue to follow through on the improvement of individual resource recovery and waste disposal systems. This includes issues such as returnable versus non-returnable containers. It also includes front-end separation in the case of paper. The Council on the Environment of New York City's economic study on the waste oil problem in the metropolitan region provides an apt example of a local resource that should not be lost, particularly in a manner

highly damaging to the environment. This is an example of the kind of analysis that is required.

Local government aided by the state, however, will bear the greatest responsibilities for managing the recovery and disposal crisis soon to plague the City. Capital and operating expenditures should be increased significantly to support the installation and operation of large scale resource recovery facilities and systems.

Optional fill arrangements should continue to be sought and they will always be needed. They offer at best, however, a temporary respite. More support for municipal resource recovery should be sought and it should be viewed as an essential ingredient of positive governmental support for environmentally sound industrial development. The key to resource recovery is having an economically worthwhile market for a recovered resource. Special assistance should be sought from the federal and state governments and special appropriations should be obtained for the City to promote market analysis for recoverable resources and the sound economic development of collection and recycling organizations, agencies, authorities and industries.

FINDINGS AND RECOMMENDATIONS

The City should declare that its policy shall be to conserve resources, promote resource recovery and enhance environmental quality. Therefore, during the coming decade the City should, within its powers, examine, set and implement priorities for managing the flow of materials through the region to reduce wastes.

1. *During 1974 the City, in consultation with the state and federal governments, should conduct a special examination of the materials requirements of New York City, resource recovery prospects, solid and liquid waste disposal problems and requirements to enhance environmental quality. A special task force involving government, citizens, business, environmentalists and labor should be appointed to advise the Office of the Mayor. The whole input and output of materials and wastes should be examined:*

- a. *to reduce the generation of wastes and conserve materials,*
- b. *to promote recycling and resource recovery, and the use of recycled products, and*
- c. *to improve environmental quality, reduce litter, and prevent the disposal of wastes in environmentally unsound ways.*

2. *Capital and operating allocations by the City should be increased significantly to match state funds available for resource recovery facilities under the Environmental Bond Act of 1972. The City should move decisively soon.*

3. *Detailed requirements for efficiency with respect to resource recovery should be spelled out:*

- a. *State and City government should underwrite market analyses for recovered materials and energy.*
- b. *Criteria for assessing environmental impacts of alternative resource recovery systems should be identified.*
- c. *Criteria for meshing partial resource recovery efforts into an overall systems approach should be identified in consultation with operators of present recycling efforts.*
- d. *Contracting constraints should be changed by Charter amendment so that resource recovery and waste management contracts in New York City and other major metropolitan centers can be negotiated for periods not exceeding 20 years (rather than five years at present) and without annual competitive bidding requirements.*
- e. *Performance appraisal and productivity criteria should be tentatively identified for new systems, especially those requiring public/private cooperation.*

4. *Voluntary citizen and institutional recycling should be strongly encouraged and supported by public collection services and public resource recovery measures:*

- a. *Separate rack collection for newspapers should be spread throughout the City.*

- b. Exemplary block, neighborhood and building associations which promote waste reduction, recycling, and clean-up should receive special recognition for their efforts.*
- 5. Productivity gains among public and private sanitation systems should be consolidated with additional indicators and with continued improvements in available collection and cleaning equipment. Productivity should be compared with sanitation workers in other cities.*
- 6. Private sanitation workers need special training programs and incentives to improve their productivity, especially with respect to resource recovery.*
- 7. Institutions and businesses must be urged to follow through on internal separation systems for recoverable wastes, such as office paper, metals and waste oil and computer punch cards and printout paper.*
- 8. The City and State should explore optional interim fill arrangements. However, the City should not now retreat from making a firm commitment to the inevitable, a constructive and comprehensive resource recovery system coupled with fills for otherwise unrecoverable materials.*
- 9. Special efforts should be made by the City and State to promote sound economic development of collection and recycling organizations, agencies, authorities and industries.*

POLLUTANTS

At the present time, New Yorkers are exposed to a wide range of pollutants acting individually and in some cases collectively or synergically. Some of these pollutants, such as sulfur dioxide, are well known in terms of their source and effects on our health. Others, such as nitrogen oxides, require more study and a number, no doubt, remain to be discovered.

In this preliminary report, we will not attempt to review status and trends with respect to exposure to toxic substances in air, water, and other media. Specifics will receive more attention in the final report. Here, instead, we address some of the general functional and structural problems of setting standards for pollutants in the New York region.

A pollutant can be described as something "out of place," a material causing undesirable effects such as impairment of human health, property damage, or environmental disruptions. Using air pollution as an example, we know with certainty that air pollution is a contributing factor to human disease, although generally we are still unable to predict the exact improvement in health that can be anticipated from a specific decrease in air pollution.

In dealing with the problem of setting standards for pollutants, ideally, one would wish to act on the basis of firm information as to a) source and current level of exposure and b) the impact on public health of the pollutant at various exposure levels. Once these data are known, a meaningful standard

could be set and control strategies instituted. Unfortunately, the data in b) are extremely difficult to obtain. Thus the health effects of current levels of a number of pollutants are unknown at this time. For this reason, standards are often unavoidably set on the basis of arbitrary judgements and honest, competent scientists can vary significantly in their recommendations. But appropriate standards are urgently needed to protect human health.

To establish a standard, scientists review the various reports, articles, and other documents describing our knowledge of a certain pollutant's effects. Most of the studies involve short-term effects, while the long-term effects may be considerably more serious. The gestation period for a form of lung cancer from asbestos, for example, is 25 to 30 years. Complicating the situation further is the typical exposure in an urban setting to many pollutants with proportions varying constantly. No laboratory setting or industrial exposure can duplicate this complex mixing and phasing of exposure to pollutants. In spite of these complications, we must establish environmental goals for both practical and legal purposes. The task must be taken up by the City as well as federal and state agencies in cases where the conditions to be controlled are unique to New York City.

Apart from these individual pollutant problems, the task force believes that the City should improve its ability to cope with existing, anticipated and unexpected environmental problems. One of the most important means would be greatly increased

interaction between the City's highest authorities and the exceptionally talented scientific community found within the City's boundaries. The City is urged to invite scientists to official and unofficial City functions. If kept informed and involved, they can provide understanding and guidance when science-related questions involving the environment arise.

FINDINGS AND RECOMMENDATIONS

Considerable progress has been made in New York City over the past decade to correct environmental problems but emergence of new problems demanding policy decisions appears to be a recurring feature of our industrial society. The City needs to refine its ability to respond to new problems as they emerge and, going beyond that, to head off potential problems.

- 1. The great pool of scientific and technical talent of persons within the City's boundaries should be brought into a clear advisory relationship with City government, to serve as independent and recognized authorities in judgements requiring these skills.*
- 2. Within federal and state constraints, the City should take the lead in establishing clear and authoritative "best available" environmental standards for New York City, as well as standards for performance of "best available" technology for use in meeting City problems of the coming decade.*

3. *New York City's own environmental monitoring system represents an early state of the art; it should be modernized and expanded where necessary, and integrated and coordinated with state, regional and federal monitoring programs.*
4. *City institutions and organizations, while subject to constant review and revision, should be expanded and streamlined to improve standard-setting, dispute settlement and enforcement; the existing City Environmental Control Board might, if increased in scope and authority, serve as a basis.*

The New York City Noise Control Code of 1972, if properly enforced and slightly augmented, could qualify as the most advanced program in the nation. The fact that the City is one of the noisiest human gathering places in history is well-known and research has now proven that loud, unpleasant and un-anticipated sounds-- "noise"-- can adversely affect the human organism intermittently and over long periods; that human performance is radically affected by such sounds and that, generally, these sounds can be corrected or eliminated with adequate planning and technology.

New York subway noises are known to exceed levels hazardous to hearing, yet, because other comparable systems have done so, we know it is possible to remedy these conditions. New York City has made some progress in this regard, with purchase of new rolling stock and more intensive attention to road-bed preparation, but progress so far is inadequate. A comprehensive and systematic noise abatement plan for the New York City subway system in its entirety must be developed and carried out, including plans and designs for control of noise in: (1) all future additions and revisions affecting the system; (2) system maintenance programs and retrofitting; and (3) an effective system-wide noise monitoring and enforcement mechanism.

Buses in the City are noisy, too, internally and externally, but these faults can be corrected with relative ease through better maintenance of vehicle interiors, engines and mufflers, the retrofitting of engine compartments of existing buses with sound-

proofing materials and, of course, application of noise level standards in City purchasing policies.

Inadequate enforcement of muffling requirements on private cars and trucks continues to be a problem. Improved inspection and licensing systems can obtain more effective reduction of exhaust noises, elimination of excessive engine, transmission and body noises, and better methods for securing loads.

A special area of noise suppression where great advances have been made during the last three years, since the Environmental Protection Administration and the Council on the Environment initiated a joint prevention campaign, is the reduction of noise in the collection of garbage. The bagging of garbage has made it possible to pick up garbage with much less banging of cans and virtual elimination of night pick-ups in residential areas has helped improve local noise conditions. Quieter compactor trucks should still be sought to follow up the prototype silent truck recently built and demonstrated by the City Sanitation Department. Trucks hauling large waste containers should be modified to reduce noise levels, especially during night return runs.

Inadequate repair and resurfacing of City streets is a constant problem for New Yorkers in many ways and poor street surfaces contribute significantly to ambient and total impact noise levels. Noise considerations should be taken into account in planning for traffic routes and the City should meet at least the noise-control criteria required on federal-aid highways. Non-emergency street openings by City and private utilities must be better coordinated.

The largely symbolic special campaign against excessive horn-honking in Manhattan during Summer 1973 may have served valuable educational purposes but more effective and stringent measures are needed. Technical requirements for quieter city horns should be established and required by law on all new vehicles registered in the City, especially taxis and City-owned vehicles.

City purchasing policies regarding vehicles other than buses should include noise specifications and the existing City vehicle fleet should be retrofitted in all cases where technology is available for operational noise abatement. This act of good faith alone would do much to support City-wide efforts to obtain compliance by private citizens and operators of commercial vehicles.

Operating procedures for aircraft on the ground at FAA-controlled airports are undergoing change in the face of energy shortages. This would be an excellent time for concerned leaders in New York City to impress FAA officials with the compatibility of noise limitations and energy-saving ground maneuver procedures. Engine starting and warm-up at Heathrow Airport in London, for instance, are not authorized until planes are cleared for take-off.

Other noise problems demanding early attention include construction noise and the noise impacts of poor land-use planning and management. Some essential steps have already been taken, through the Noise Code, toward control of construction noise but the key to success in this effort is careful attention to monitoring these sources for effective enforcement. Here, the concept of total-impact noise is important, to assure that intermittent

bursts of noise do not escape notice and abatement, so monitoring must be prolific, wide-spread, and frequent.

As with the approach to airport noise, the act of assuring that noise considerations are included in land-use planning, in zoning laws, and in plans for residential building (to insure that noise from inside, as well as outside, the building does not intrude on human comfort) should be pursued and greatly increased attention should go to upgrading design and construction features and acoustical insulation in existing buildings where noise levels present a problem.

FINDINGS AND RECOMMENDATIONS

The Noise Control Code of 1972 should be diligently enforced and broadened to include: (a) improved noise suppression as part of preventive maintenance for transportation systems; and (b) systematic reassessment of noise levels and revisions of the Code.

- 1. A comprehensive and systematic noise abatement plan for the entire New York City mass transit system must be developed and implemented.*
- 2. New York City should amend its purchasing policy for all equipment and vehicles, including garbage trucks, to include noise specifications which will provide employees and the general public with adequate safeguards against noise.*

3. *New York City should develop a total noise policy for streets and highways within its boundaries.*
4. *Noise control - external and internal - should become a factor in City-approved building construction and modification and construction site noise must be brought under control through application of modern noise control and equipment technology.*
5. *Modern acoustical engineering principles should be incorporated into all City decision-making affecting transportation and building design and should be equally applied in control of ambient City noise.*

ENVIRONMENTAL EDUCATION

Environmental education in a metropolitan area should be an integrated, multi-disciplinary process through which people learn to understand and care for their man-made environment, the natural environment and the relationship which exists between the two.

Like science education 15 years earlier, sparked by the launch of the first Sputnik, environmental education has experienced a meteoric rise in importance since the environment suddenly became a vital national issue in 1969 and 1970. As a result, the requirements for environmental education have grown much more rapidly than the ability of established educational institutions to incorporate these new needs into the educational system. Crises in definition, misapplication of resources, bursts of energy and lulls in activity have all resulted. But a consensus as to the objectives of environmental education is finally emerging, emphasizing a need for:

---Development of environmental literacy based on an understanding of natural laws.

---Development of an environmental ethic leading to lifestyles which are in harmony with sound environmental principles.

---Ability to make decisions based upon clear environmental ethics and understanding.

---The imperatives of individual action for environmental improvement.

In general, students are being educated in a number of roles--resource consumers, voters, active citizens. Additionally, the knowledge imparted to children can have the "fallout" effect of influencing and educating adults. Both children and adults must learn the impact of their actions on the environment, the total interdependence of all living things and the potential influence of the individual on decisions which affect his environment.

There are three chief modes of environmental education. The first is to work environmental topics into such traditional subjects as biology, social studies, literature and so forth. The second is to offer additional subjects, dealing exclusively with environmental problems. The third is to restructure the entire curriculum around the idea of environment, so that each subject offered deals with a specific discipline under the framework of environmental problems. Though the third method may be theoretically the most elegant and desirable, it is not at this point a practical recommendation and some combination of the first and second modes must be employed.

A wide variety of possible teaching methods is available in environmental education. In consonance with current trends, environmental education should be presented as "discovery" programs. Students should become instruments and sources of useful local environmental information and of actual, positive environmental change.

Before New York City's needs for environmental education can be fulfilled, a number of institutional changes will have to take place. Most important is firm financial support from city, state and federal governments and the private sector.

An expanding number of programs, materials and facilities for environmental education is being offered by an increasing variety of sources and it is vital to educators that a clearing-house be established, in an existing governmental organization, so that researchers, writers and educators can make use of available classroom aids and make certain that their scholarly work is not duplicating that of others.

Environmental education in New York City would benefit greatly from existence of an authoritative and recognized group of specialists and educators who, on behalf of all education in the City, could:

---Identify and disseminate the objectives and parameters of environmental education.

---Examine existing curricula in various disciplines and recommend modifications designed to make them more compatible with sound environmental concepts and attitudes.

---Evaluate environmental education materials and disseminate these findings, with recommendations for methods of using them in an interdisciplinary curriculum.

---Propose development of new curriculum materials, resources and facilities, such as urban environmental education centers and "city-to-country" programs.

The City needs teachers trained in environmental education, with the proper materials and support. Teacher training programs--workshops, seminars, mini-courses, and summer courses should be sponsored by the Board of Education, with environmental groups playing an active role in instituting these programs. More in-depth programs, on the Master's degree level, should be instituted to train both environmental leaders and future teachers.

Outside the school, public, quasi-public and private agencies can play an important role in planning and supplementing the curricula established by the school systems. Zoos, museums, botanical gardens, parks departments, environmental action groups, Boy and Girl Scouts, and others should be encouraged to assist the schools by providing expertise and such supportive services as speakers, films, publications, trips, mobile vans and exhibits. These agencies can also be even more effective than school systems in adult environmental education.

FINDINGS AND RECOMMENDATIONS

Establish an office within an existing agency of City government to serve as a clearinghouse among educational and environmental groups offering materials, programs and facilities for environmental education and to coordinate the diverse activities of these groups. In addition, the City should:

- 1. Increase funding for environmental education in New York City.*
- 2. Form a task force of environmental education specialists to advise the clearinghouse.*

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3. *Initiate teacher-training programs in environmental education.*
4. *Establish a recognized graduate environmental education program to train leaders in the field as well as teachers.*
5. *Expand environmental education activities for adults.*
6. *Introduce environmental considerations into vocational training programs and driver education.*

ENFORCEMENT AND DISPUTE SETTLEMENT

The City must have a spirited climate of enforcement if there is to be a meaningful program of protection and restoration of the City's environmental resources. Laws alone are useless. It should be remembered that New York State's environment suffered substantial damage and has undergone substantial recovery, for instance, with virtually the same set of statutes, rules and regulations applying during both periods. What has not remained constant is the attitude toward dealing with these problems.

The causes of many of our most distressing elements of pollution--whether noise, air, water, land or solid waste--are largely understood, the sources identified and the technology developed enough to provide many workable solutions to the mechanical aspects of pollution. Often, however, as the saying goes, we are dealing with people problems--people who don't care, those who care but don't act, those who care but find the solutions are beyond their control. In many instances, as with automobiles and excess and non-returnable packaging and containers, we are dealing with life styles which must change, either voluntarily or otherwise, if New York is to improve its environment. One of the problems for New York has been reluctance on the part of its citizens, public officials and commercial enterprises to comply with the City's environmental laws on a voluntary basis.

With its noise control code (Local Law 57), air pollution control code (Local Law 49) and proposed new sanitation code

(Local Law 74) and its Environmental Control Board, the City has created in recent years, or is proposing, the tools for removing many of the irritations and threats to health of living here. What has been lacking is adequate commitment to use these tools effectively and efficiently.

The existing New York City Environmental Control Board should be expanded in scope, competency and authority or a new structure established to serve as an "environmental court". Such a body, properly enabled, has been shown to serve the purpose of relieving the congestion in civil and criminal court systems of other, smaller and less complex city governments and would clearly benefit New York City.

The salient characteristic of environmental affairs today in the United States and especially in New York City is the tendency of environmental progress to bog down in dispute, disagreement and litigation. Disagreement and rigid, almost ideological, thinking have focused attention as much on the ways and means of achieving forward progress as on the nature, scope and urgency of environmental damage caused by the activities of Man.

We do not have adequate systems for settling these disputes fairly and expeditiously, in the planning process or later, with the result that the courts have become one of the major arenas in the environmental fight. Courts are clogged with criminal and civil environmental litigation, judges and juries are often not adequately informed about questions of great technological complexity and decisions are not reached, or

wrong decisions are arrived at. The system of appeals so precious to the nation is often cynically employed as a system of delay and dilatory maneuver and--nothing gets done. If threats to the environment are permitted to continue while the requirements of courtroom justice are fulfilled, preventive public action cannot take place. Improvements are needed.

FINDINGS AND RECOMMENDATIONS

1. *The City has prepared a complete revision of its sanitary code (proposed Local Law 74) which, if vigorously enforced, will continue the trend to cleaner streets. The Sanitation Department's enforcement program has recently received a needed boost from the State legislature. Sanitation policemen can now serve arrest warrants on those building superintendents, landlords, and merchants who fail to respond to department-issued code violation notices. With this authority and the use of computer records, and a desire on the part of the Department and the Environmental Control Board, violations by those who fail to obey the code can be quickly processed.*
2. *Illegally parked cars prevent street cleaners from reaching the curbs. Sanitation police and all sanitation supervisory personnel have the authority to ticket these illegally parked cars and should be required to do so. They should call offenders to the attention of the police for towing.*

3. *If the need to reduce air pollution from motor vehicles should lead to the reduction in the City's business districts of on-street and off-street parking and to bans on taxi cruising, enforcement measures by police and the Traffic Department would be greatly facilitated.*
4. *To locate unregulated furnaces and incinerators, a computerized reporting and compliance monitoring system for stationary air pollution sources must be developed and implemented. It would be based partially on the present construction and operating permit systems and a separate review of the records of local oil suppliers and carters.*
5. *The City must also complete inventories identifying industrial emissions and the present status of compliance measures by industrial sources.*
6. *The City should make a vigorous commitment during the next several years to enforcing pre-treatment standards for industries discharging wastes into the City sewer system.*
7. *The wealth of concern and energy now devoted to environmental affairs by citizens and citizen groups in New York City can and should be mobilized by the City as a trained citywide auxiliary force in the successful manner used in creating auxiliary police forces, to monitor environmental performance and to serve as neighborhood "nerve centers" for disseminating accurate information.*

TOWNSCAPE

It is the position of the contributors that concern for quality of townscape is not separate from other social concerns; quality of place matters because places condition people.

The ideas put forward in summary here do not stem from a nostalgia for a different life or from an unreasoned anger at technology. They are submitted as a part of a concern with the more identifiable social ills of poverty, crime and bad housing in the belief that improving the functioning and livability of our city can contribute to the solution of those ills.

In general terms, the land planning issues for New York are those which at long last are being debated throughout the country. In the context of a nearly fully developed city with serious development problems the basic question here is more critically important than elsewhere: can we achieve needed development without unacceptably compromising our environment?

Continued commercial concentration south of 59th Street in Manhattan and in the downtowns of other boroughs should only be carried out if congestion can be avoided, air and water pollution problems are met and energy is both available and used carefully. Therefore, zoning districts, transit improvements, building code regulations, supporting and complementary uses must all be merged into a coherent whole. Realistic standards which are woefully lacking must be developed in each of these areas. The City Planning Commission's recent efforts to improve the quality of the City's residential environment should be pursued. In addition to zoning issues, a rational housing

program must be added to provide necessary subsidies. The problem cannot be narrowly considered. The issue is the quality of life in the community, not simply the safe, sanitary or even non-polluting characteristics of a structure or group of them.

The City must also decide what types of industry it is willing to encourage or even subsidize (and where) and which ones should be forbidden.

Of equal concern, though seldom given it, is the provision and operation of adequate open space.

In every facet of this undertaking, the issue of what can be achieved by regulation or incentive and what must be paid for by public funds will often be overriding questions affecting the results of every other effort.

In pursuing these goals, it is essential to recognize that how things look and how things work are inextricably inter-related. For it is precisely the look, feel, and character of a great city--a London, Paris, Rome--that is a primary, not a superficial, ingredient of its long term viability. In this sense all planning-development decisions are urban design decisions. And in designing its own facilities, whether street furniture, sidewalks, subway stations or buildings, the City itself should lead.

Too often, even where money is available for good design and where whole areas have been rebuilt, the result is uniformity and sterility. This trend can destroy the little that New York has of genuine urban elegance or greatness, its few handsome

avenues and sophisticated plazas. Particular care must be taken with what is left, such as the side streets all over town that are only beginning to be affected by the type of bleak construction that has characterized too much avenue development.

As one contributor put it, "New York's side streets are a human-scale, pedestrian environment. Their measure is that of the foot and the eye. Their feature is their fascinating continuity. One is drawn along by the unflagging interest of their uninterrupted, highly personal pleasures and uses in an endlessly varied architectural context. To destroy this, you can bomb the streets or build office tower plazas. The effect is just about the same.

"Wherever the lively streets exist, there is vitality in a city. This is where the action is."

In the City today, the environment is made by man. We have eradicated many of the City's basic landforms: its hills have been leveled, streams buried, rock outcroppings sheared away--the things that gave its original landscape feature and diversity, coherence and composition.

In addition, much of New York's man-made historical townscape also disappeared before the current movement to preserve historic landmarks got under way and, finally, much of human value, though not historically significant, is disappearing too. In New York today, if you love a building or if you care about a corner, you must do so with the understanding that the physical site can change overnight. The feeling of always having to live in the present may contribute to urban dynamics. It also makes it difficult to find or sustain roots

in both historical and personal terms.

It is up to us to do more to preserve and use what we have and to do more on a human scale when we create. It is possible in this summary only to cover a few of the specific suggestions made in the underlying reports.

The parks are those areas of the City most obviously designed for and dedicated to the pleasure and quiet of its citizens. They and its waterfront are also among the few areas where the City's original geography and topography remain palpable and perceptible. As works of man, which they are, they have also by the passage of time become of historical significance. In addition, "better parks and recreation" consistently rank high on citizens' lists of priority. Despite all these factors, the City's relative commitment to parks within its budgets has for years been grossly inadequate and is declining. The result has been that a line of generally sensitive and devoted City park commissioners have been condemned to inadequate efforts to halt the deterioration of our parks with no hope of improving them or their use. While creating new organizations and management systems elsewhere, the City has paid little attention to the management of the park system. Inadequate budgets and the fragmentation of responsibilities has made a hollow promise of the City's commitment to recreation outside the parks.

State and federal commitments to the City for parks and recreation are in early or developmental stages and should be followed through and strengthened. Most importantly,

work must be done (which has never really been done) to assess people's open space and recreation needs so that money, which will always be scarce, can be sensibly used.

Outside of the parks in our City, there are not many opportunities to stop to rest or watch people go by, or congregate, and where there is the most to see there are the fewest places from which to see.

It is odd this should be so. New York has the best urban design program of any city in the country. By offering bonus incentives to builders, the City has obtained plazas and wider sidewalks, theaters, arcades, statuary, fountains, and other amenities. But the emphasis is on visual effect, and in stressing form many architects sacrifice function; there is nothing in municipal procedure to make them consider the social uses of design, let alone plan for them, and once a project is built, there is no check to see how well it works for people. Thus is the most expensive open space in the world squandered.

On the basis of studies that have been made it is clear as a minimum that zoning regulations should be changed to require a reasonable amount of sitting space in building plazas. As a minimum, builders should be required to provide as many feet of sitting space as there are feet in the outer dimensions of the property, a fairly easy standard to meet.

More than 100 of the nation's 500 largest corporations are headquartered in New York. While it has in the recent past too often been suggested that "business should" take care of social problems, it seems clear that a small commitment by each to reviewing, in the light of available knowledge, the usefulness of space created by zoning regulations on their own front doorsteps would make a major contribution to the townscape in our most congested areas.

Open space and new opportunities to use it are available elsewhere as well. Over 30% of our city land area is given over to vehicular traffic, and the problems of danger, pollution, noise and congestion that result. Elsewhere in the Council's report it is recognized that even in the absence of the energy crisis other means of transportation which do not aggravate these problems (and incidentally consume less ground space) are urgently needed. Saving energy will make this easier to achieve and in turn give renewed hope to those who have championed the cause of the pedestrian in the past. Walking is the most efficient way to move large numbers of people for short distances in high density areas. Common-sense suggests that pedestrian movement be encouraged.

Unlike most plans to reverse the deterioration of urban life, which often are so vast as to preclude implementation, planning for pedestrians can be undertaken experimentally and in stages, and made part of the continuing structural changes occurring in every city. It can be applied in areas where benefits would be abundant and obvious to all. The ease and economy with which a street can be temporarily closed facilitate experimentation. If

the results of an experimental closing are favorable, the project should go forward. If not, it can be revised or dropped.

Experiments should be made with widened sidewalks, part-time and full-time pedestrian streets, and "park streets", where curbs would be removed and the road bed filled in, creating a single level between building lines.

A special City agency should monitor and evaluate experiments of this sort. Although the Departments of Traffic, Police and Sanitation are supposed to concern themselves with the well being and happiness of the man in the street, and within the area of their special responsibilities may well do so, none is specifically responsible for creating improved conditions for those who use the streets. To do this job, an advocate for pedestrians is needed.

The possibility of improving the environment for New York depends in large part on the attitude of New Yorkers to their City. That attitude begins with the neighborhood, however defined, in which each one of us lives. If New York is to become a more humane City, it must begin by re-encouraging strong neighborhood feelings. Diversity of neighborhoods is one of New York's greatest assets and their existence is a key to the rediscovery of New York, a rediscovery which can have a profoundly humanizing effect on life in the City. City governments in the recent past have done something, but can easily do more, to help neighborhoods establish their own identities and help their own environments. This is particularly important in the poorer areas of the City. City dwellers at any income level need usable open space but poor families are specifically

affected. Apart from living with internal crowding, as well, they live with what the core City holds for them, while others buy space through travel or otherwise.

Pride in and concern for the City as a whole require also that many who have not seen it as a whole do so. This applies to all its citizens.

The poor person may visualize City space in a distinctive manner. He is, so to speak, a block dweller. He does not feel at home outside his neighborhood, perhaps not anywhere farther than 10 to 20 blocks from his home. Some children in Harlem have never seen the Hudson River. There are families in Queens who do not know what Staten Island looks like. The man who has more money may in his own mind be a City dweller and call on its resources as a whole. But it might help the City move forward if he saw the whole City for himself.

Cities are loved not so much for their natural and architectural splendors but also for the variety and intensity of the spectacles that the ordinary events of human life generate in the streets, the malls, the squares, the parks, and other public places. The human, as against economic, success of a city is measured by the opportunities that it gives its citizens and its visitors to participate in its collective life.

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