contains a variety of disease-producing microbes. Secondly, there has been a deep feeling, stemming from our frontier history, that the resources of this Continent are well-nigh inexhaustible, including the resources of water, air and land in which to dump our waste products. Finally, there is the strongly-held opinion that nature quickly purifies the man-contaminated environment, be it air, water or soil. While the last is true to a degree, we have overestimated badly the capacity of natural forces to restore the environment's quality, whether the contaminant be human sewage, industrial wastes, automotive effluents, pesticides or animal dejecta.

An increasing standard of living generates an increasing burden of wastes, so that the most affluent society has the capacity to produce the widest variety of pollutants in the largest amount.

Surely it should be a measure of the quality of our civilization that while we improve living standards through increased per capita income and other resources, at the same time we see to it that we don't foul our own nest, or if we have fouled it that we devote sufficient resources to clean it up and prevent further damage caused by our indifference and greed.

During the past few years, attitudes have been changing. The magnitude of the problem is now more generally appreciated by the public, the Congress and the Executive Branch, and a number of very important steps have been taken. Despite this favorable change in attitude, I question most seriously whether problems of pollution have been given the high priority they deserve; I question whether we are yet in the frame of mind to commit to their abatement the very large resources of brains and dollars that are going to be necessary in order to push back the flood, and to restore our natural habitat to something approaching its pristine state of great natural beauty.

As I have indicated, at the present time much of our populace is aware of some of our Nation's pollution problems. A few classical examples, such as the pollution of Lake Erie and the smog and pesticide problems, have been popular subjects for lay writers. Likewise, many persons in our population have been subjected to discomfort, losses, or disgusting sights and odors caused by pollution. Many of us have observed a once sparkling, clear trout stream that is now devoid of fish, with its waters odoriferous and green with noxious algae, or we have become aware that birds or other kinds of animal life which were once common to an area are now rare or gone. It is these kinds of obvious degradations and catastrophic changes which have finally awakened the public. Now the protests against pollution no longer come from a few in our population. At all levels in our society, concern is being increasingly expressed about the deterioration of our environment and there has arisen a determination to do something about it. The concern I expressed above is whether this determination is strong enough.

Although they appreciate a few facets of the problem, few people are aware of its scope and seriousness or of what is required to abate the tide of pollution. Likewise, few of us are aware of the multitude of changes and effects upon other forms of life and upon ecological processes which have accompanied each of the changes that we have viewed. In fact, scientific knowledge is sparse in this area—and badly needed.

It should be remembered that ecological change is not a new happening in the history of the earth and its inhabitants. The earth's surface has been undergoing physical changes for eons of time. The results have included the very formation of our atmosphere through biological action, topographic alterations such as the formation of mountain ranges, the origin and death of lakes and rivers, the rising of land masses from beneath the sea, and sometimes the sinking of terrestrial environments. Except for catastrophic events, such as are associated with volcanic activity and earthquakes, major modifications of the earth's crust have occurred slowly.

There have been also been gradual but extensive changes in the properties of the air, waters, and land. The quantitative chemical composition and temperature of the air and surface waters have changed. The oceans and certain lakes have increased in salinity. Soils have been formed and deposited in some areas and removed from other areas by water and wind erosions. Levels of nuclear radiation from natural sources have decreased with time, due to radioactive decay of radioactive minerals in the earth's surfce and because of changes in the atmosphere.