

Introduction

It is probable that in the near future many industries will be required to maintain a continuous environmental quality assessment program to demonstrate what biological impact the materials they produce, both products and waste products, have upon ecological systems. We have found that environmental management groups (industrial and governmental) have suddenly and, in some cases, unexpectedly faced environmental crises, but often know very little about the biological aspects of water pollution.

This volume is intended to be a management tool to apprise the reader of the types of considerations involved in making biological assessments of water quality, developing water pollution monitoring programs, and assessing the effects of potentially deleterious waste discharges in the aquatic environment. Also, it provides information which would enable a non-biologist to get a state-of-the-art view of the existing techniques available, as well as some historic perspective.

Papers by world authorities on the use of fish, algae, aquatic invertebrates, and bacteria in the assessment of pollution, in addition to bioassays for evaluating the toxicity of products or waste effluents, are included. Futuristic methods for continuous biological monitoring of industrial effluents are presented, as well as a possible alternative to the much belabored Biochemical Oxygen Demand. Obviously, no book covering such a vast array of subjects can cover any one in sufficient detail, therefore, papers in the volume contain excellent bibliographies.

The Symposium on Biological Methods for the Assessment of Water Quality held at the ASTM Annual Meeting 26–29 June 1972 in Los Angeles was designed to form Subcommittee D-19.01 on Biological Monitoring of Committee D-19 on Water, and was intended to be a springboard from which ASTM methods for the biological assessment of water quality will develop.

We feel that the authors have done an excellent job of keeping technical terms to a minimum and have directed their efforts toward making biological monitoring useful and understandable to all readers. In short, we feel

that this publication offers to the nonbiologist and biologist excellent resource material essential in developing a biological monitoring program.

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