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Measuring the Benefits of Water Pollution Abatement

DANIEL FEENBERG
EDWIN S. MILLS

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Preface

Although this book is about techniques for measuring the benefits of water pollution abatement, almost all the applications and procedures used are equally applicable to air pollution.

An introductory chapter sets the stage for the analysis. Chapter 2 presents a review of basic welfare economics. Chapter 3 derives social benefit measures from theoretical welfare concepts. Chapters 4 and 5 present our basic theoretical contributions in measuring instream benefits of water quality improvement. It is in this context that the public good aspect of pollution is most clear. Chapter 6 presents the theory of withdrawal benefits of water quality improvement. (Most of the basic theoretical contributions in this book are Daniel Feenberg's and are taken from his dissertation.) Chapters 7 and 8 present empirical studies of instream and withdrawal benefits. Chapter 9 critically reviews ongoing studies of the benefits of the national water pollution abatement program and presents new estimates. Chapter 10 presents concluding comments.

The book deals with basic theoretical and applied welfare economics. Readers should have a thorough command of elementary microeconomics. Some of the discussion is technical, but we have limited the advanced mathematics to Chapter 5 and some appendices. The rest of the book can be read by anyone with a knowledge of elementary calculus. Chapter 5 and the appendices require an understanding of more advanced mathematics, and except for these parts, the book can be used as supplementary reading in undergraduate environmental economics courses.

Water pollution analysis is not intrinsically urban: Pollution is restricted to neither urban nor rural areas. However, almost all the emprical research reported in this book is urban. The single most elaborate empirical study