
STUDIES IN URBAN ECONOMICS

Measuring the Benefits of Water Pollution Abatement

**DANIEL FEENBERG
EDWIN S. MILLS**

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Measuring the Benefits of Water Pollution Abatement

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Contents

Preface	ix
1 Introduction	1
1. Scope and Background	1
2. Discharges and Ambient Environmental Quality	4
3. The Dimensions of Ambient Water Quality	8
4. Effects of Ambient Water Quality on Human Welfare	12
2 Welfare Economics and the Basis of Benefit Measurement	19
1. The Nature of Welfare Economics	19
2. Basic Welfare Analysis	21
3. Market Failure and Government Intervention to Ensure Market Efficiency	28
4. Benefit Measures for Public Goods	34
3 Economic Theory of Benefit Measurement	37
1. Introduction	37
2. Marginal Conditions for Public Good Provision	38
3. Basic Benefit Concepts	40
4. Consumer Surplus as an Approximation	46
5. Some Special Problems	48
6. Conclusions	54
Appendix: Option Value	55

4 Measurement of Instream Water Quality Benefits	57
1. Introduction	57
2. A Survey of Empirical Techniques of Instream Water Quality Benefit Estimates	58
3. Weak Complementarity and the Travel Cost Approach to Benefit Estimation	63
4. Hedonic Prices and Land Values	69
5 Estimating Public Goods Demands and Demand Interdependency	75
1. Introduction	75
2. Definition of the Demand for Public Goods	75
3. Weak Complementarity	76
4. Derivation of the Theorem	77
5. Example	79
6. Use of Market Data	80
7. Weak Substitutability	80
8. The Hedonic Price Equation	83
9. The Theorem with Compensated Demand Functions	85
10. Multiple Private Goods	87
11. Conclusions	90
6 Measurement of Withdrawal Benefits	91
1. Introduction	91
2. Withdrawal Benefits and Cost Functions	94
3. Withdrawal Benefits and Input Demand Equations	99
4. Empirical Studies of Withdrawal Benefits	100
Appendix: Firms' Demand for a Public Good	103
7 Empirical Studies of Instream Benefits	105
1. Introduction	105
2. Statistical Specification in Travel Cost Studies	107
3. A Logit Model and Its Estimation	110
4. A Property Value Study	120
5. An Aggregate Tobit Model	125
Appendix 1	130
Appendix 2	132
8 An Empirical Study of Withdrawal Benefits	137
1. Introduction	137
2. Comments on Recent Health Effects Studies	139
3. A New Study Using EPA Data	143
4. Comments on Studies of Industrial Benefits of Pollution Abatement	147

9 Estimates of National Benefits of Water Pollution Abatement	151
1. Introduction	151
2. A Critical Evaluation of Techniques of Benefit Estimation	154
3. Revised DRPA Estimates of National Recreational Benefits	157
4. Swimming Benefit Estimates Based on the Boston Data	162
5. Concluding Remarks on National Benefits	164
10 Conclusions	167
1. Introduction	167
2. Basic Welfare and Benefit–Cost Theory	168
3. Measurement of Benefits from Water Pollution Abatement	168
4. Empirical Studies of Benefits from Water Pollution Control	169
References	173
Index	177

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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 empirical research reported in this book is urban. The single most elaborate empirical study