## 大 学 环 境 教 育 丛 书



影印版

Nancy K. Kubasek Gary S. Silverman

## **Environmental Law**

(Sixth Edition)

# 环境法

(第6版)





#### 大学环境教育丛书

(影印版)

Nancy K. Kubasek Gary S. Silverman

### **Environmental Law**

(Sixth Edition)

# 环 境 法

(第6版)

清华大学出版社 北 京 北京市版权局著作权合同登记号 图字: 01-2008-4140

Original edition, entitled ENVIRONMENTAL LAW, Sixth Edition, 978-0-13-614216-4 by NANCY K. KUBASEK, GARY S. SILVERMAN, published by Pearson Education, Inc, publishing as Pearson Prentice Hall, copyright © 2008.

All Rights Reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage retrieval system, without permission from Pearson Education, Inc.

China edition published by PEARSON EDUCATION ASIA LTD., and TSINGHUA UNIVERSITY PRESS Copyright 2008.

This edition is manufactured in the People's Republic of China, and is authorized for sale only in the People's Republic of China excluding Hong Kong, Macao and Taiwan.

## For sale and distribution in the People's Republic of China exclusively (except Taiwan, Hong Kong SAR and Macao SAR).

仅限于中华人民共和国境内(不包括中国香港、澳门特别行政区和中国台湾地区)销售发行。

本书封面贴有 Pearson Education (培生教育出版集团)激光防伪标签,无标签者不得销售。版权所有,侵权必究。侵权举报电话: 010-62782989 13701121933

#### 图书在版编目(CIP)数据

环境法: (第6版) = Environmental Law, 6th Edition: 英文 / (美) 库巴塞克(Kubasek, N.K.), (美) 西尔弗曼(Silverman, G.S.) 著. 一影印本. 一北京: 清华大学出版社, 2008.11

(大学环境教育丛书)

ISBN 978-7-302-18853-7

I. 环··· II. ①库··· ②西··· III. 环境保护法-高等学校-教材-英文 IV. D912.6

中国版本图书馆 CIP 数据核字 (2008) 第 173039 号

责任编辑:柳萍

出版发行:清华大学出版社

地 址:北京清华大学学研大厦 A 座

http://www.tup.com.cn

邮 编: 100084

社 总 机: 010-62770175

邮 购: 010-62786544

投稿与读者服务: 010-62776969, c-service@tup.tsinghua.edu.cn

质量反馈: 010-62772015, zhiliang@tup.tsinghua.edu.cn

印刷者:北京季蜂印刷有限公司

装 订 者: 北京市密云县京文制本装订厂

发 行 者: 全国新华书店

开 本: 185×230

印张: 32.25

版 次: 2008年11月第1版

印 次: 2008年11月第1次印刷

印 数: 1~3000

定 价: 58.00 元

本书如存在文字不清、漏印、缺页、倒页、脱页等印装质量问题,请与清华大学出版社出版部联系调换。联系电话: 010-62770177 转 3103 产品编号: 029578-01

### ┌出版前言

在 21 世纪之初,面临各种环境问题,人类清醒地认识到要走可持续发展之路。而发展环境教育是解决环境问题和实施可持续发展战略的根本。高等学校的环境教育,是提高新世纪建设者的环境意识,并向社会输送环境保护专门人才的重要途径。为了反映国外环境类教材的最新内容和编写风格,同时也为了提高学生阅读专业文献和获取信息的能力,我们精选了国外一些优秀的环境类教材,加以影印或翻译,组成大学环境教育丛书。所选教材均在国外被广泛采用,多数已再版,书中不仅介绍了有关概念、原理及技术方法,给出了丰富的数据,也反映了作者不同的学术观点。

我们希望这套丛书的出版能对高等院校师生和广大科技人员有所帮助,并为我国的环境教育事业作出贡献。

清华大学出版社 2008年10月

#### PREFACE

#### SE

When I began teaching environmental law to undergraduates in 1982, there were very few such courses offered outside of law schools. There were even fewer resources available for teaching courses to anyone other than law students. My first semester, I taught the course using one of the two available law school texts.

The next year, I began putting together my own materials, materials that over the next few years evolved into an environmental law "text" designed especially for nonlaw students that I made available to my students through a copy service. To improve the quality of the materials before attempting to publish them, I asked my colleague Dr. Gary Silverman, the director of our university's Environmental Health Program, to write the chapters on water-quality control and management of waste and hazardous releases, areas in which he has special expertise.

The result was the first edition of *Environmental Law*, a book designed to introduce those without any legal or special scientific training to the system through which our nation attempts to preserve the environment. Although this book was written for college students at either the undergraduate or master's level, I had hoped that it would also be useful to anyone interested in learning about our system of environmental law and that it would be a helpful reference for anyone in business who is attempting to negotiate the morass of environmental regulations that affect businesses today. From the comments that I have received from users of the book, it is clear that, in some sense, the book is meeting these goals. Readers of the book range from graduate and undergraduate students to businesspersons and ordinary citizens interested in environmental law.

Reflecting the fact that background knowledge is often important for understanding specific areas, this book provides two key types of background necessary for understanding environmental law. First, the initial chapters explain how our legal system functions in general. Second, the initial portions of the latter chapters provide the basic scientific knowledge necessary for understanding environmental law. Thus, the reader may gain a fundamental understanding of not only what the laws are but also why they are needed.

Several people helped to make the first edition of this book, and consequently this fifth edition, a reality, and I thank them for their contributions. Thorough and insightful reviews were provided by the following professors:

James Carp, Syracuse University William Clements, Norwich University Frank Cross, University of Texas David Hoch, University of Southwestern Louisiana May Kieffer, Ohio University Richard Kunkle, The College of St. Thomas Patricia Tulin, University of Hartford

Their reviews led to vast improvements of the final version of the first edition of this book. In fact, it is only because of a suggestion of one of these reviewers that a very important chapter of this book was written, the chapter on energy policy and natural resource protection.

When changes in environmental law necessitated the first revision of Environmental Law, helpful reviews were provided by Paula C. Murray, of the University of Texas, and Eric Oates, of the Wharton School. Numerous changes were made in response to their comments.

Reviewers were once again helpful when it came to the third edition of this text. I once again thank the following professors for their helpful insights:

Donald A. Fuller, University of Central Florida Mary Keifer, Ohio University Michael Magasin, Pepperdine University Michael A. Tessitore, University of Florida

Perhaps the most significant contributor to the third edition was Carrie Williamson, a former environmental law student and my research assistant at the time of the third revision. Having used the book in class, she was able to point out places where it was unclear and make suggestions for its improvement. She also spent numerous hours doing research to ensure that the edition contained the most up-to-date figures possible at the time of publication. Finally, she contributed to the improvement of the book by drafting essays featured in the new "Thinking Critically About Issues in Environmental Law" section. Her assistance on this revision was invaluable.

With the fourth edition of this text, the former Chapter 9, Natural Resources and Energy Policy, was divided into two separate chapters to allow expansion of both of these areas. Many users were saying that they would like to devote more time to natural resource issues and the energy crisis of 2001 certainly stimulated growing interest in energy issues. Many questions, such as whether we should build more nuclear power plants, were considered nonissues in the 1990s but were being hotly debated as the fourth edition went into press and continued to be on the front burner as the fifth edition was being written.

Special credit for the improvements in the fourth edition goes to my former assistant, Anne Hardenbergh. A former student in my environmental law class, she used her experience with the book as a student to suggest areas of improvement. She also helped to upgrade the quality and number of Web sites at the end of each chapter. Many users of the book sent in suggestions that helped improve the fourth edition, but three stand out for their unusually valuable contributions: Thomas Ostrom, Mike Eckhoff, and Lester Lindley.

As with previous editions, many of the improvements in this fifth edition came from suggestions of users and readers of the text, and their contributions are invaluable. Reviewers who made helpful suggestions for this edition included:

Craig Collins, University of California at Davis Timothy Dixon, Nova Southeastern University Debora Halbert, Otterbein College Laurel Phoenix, the University of Wisconsin at Green Bay Alex Sauders, Central Carolina Technical College Jefferey M. Sellers, University of Southern California Dennis Nettiksimmons, University of Montana

My research assistant, and future lawyer, Alex Frondorf, did extensive research for the fifth edition, as well as all of the individuals at Pearson Prentice Hall who helped to pull this edition together: Alana Bradley, my editor; Jane Avery, her assistant; Denise Culhane, production editor; and Colleen Franciscus, project manager. And finally, the students and professors who used the first four editions of this book and offered helpful criticisms cannot be omitted. Although they are too numerous to list by name, their contributions were invaluable.

In revising this book for the Sixth Edition, I was extremely fortunate that my former research assistant, Alex Fronforf, who did such good research for me on the Fifth Edition, was willing to work with me again on this newest edition. His contributions were invaluable. I was also assisted in this revision by two other research assistants, Daniel Tagliarina and Amanda Valentine. Again, several reviewers made useful suggestions. They include:

Christopher Robinson, Clarkson University Michael Campenni, McLennan Community College John Sutherlin, University of Louisiana, Monroe Mark Imperial, University of North Carolina Wilmington Britt Bailey, College of Marin Leonard Champney, University of Scranton Jude Benavides, University of Texas at Brownsville David Steffy, Jacksonville State University J. David Aiken, University of Nebraska-Lincoln David Jensen, Texas A&M-Corpus Christi John Marshall, Pulaski Technical College James Reed, Christopher Newport University Joe Arruda, Pittsburg State University Victor Okereke, Morrisville State College Charles Kliche, South Dakota School of Mines and Technology Murel Jones, Virginia State University Kate Joyce, Plattsburgh State University Paul Pavlich, Southern Oregon University Nicholas Lees, Columbia Southern University Susan McCabe, Kellogg Community College Bonnie Alexander, Valley City State University

Peter Julovich, Ivytech Community College of Indiana Romy Knittel, St Bonaventure University Brent Sipes, University of Hawaii at Manoa Lori Poloni-Staudinger, Northern Arizona University Gordon Bennett, University of Texas, Austin Brian Swenty, University of Evansville Jean Watts, Bluegrass Community & Technical College Robert J. Shostak, Ohio University LeGene Quesenberry, Clarion University Haydn Fox, Texas A&M University—Commerce Rodney Clinkenbeard, Oklahoma University Health Sciences Center J. Joseph Wilder, Hilbert College Leverett Nelson, Loyola University: Chicago Tim Eastly, Kent-Trumbull Campus Wendy Scattergood, St. Norbert College David Downie, Earth Institute at Columbia University John McGill, York Technical College

Finally, I acknowledge the contributions of those at Prentice Hall, without whom this book could not have been revised. They include: Executive Editor Steve Sartori, Project Manager Kerri Tomasso, Editorial Assistant Marybeth Ward, Production Editor Melissa Feimer.

This is the second revision of the book made during the tenure of President George W. Bush. Unfortunately, the second President Bush has turned out to be a much greater foe of the environment than most had predicted. His administration was given an "F" on the League of Conservation Voter's 2003 Report Card for performance on environmental issues. During his first term, in conflicts between protecting the environment or protecting the timber, mining, and oil industries, the Bush Administration clearly favors the latter over the former. During his second term, as changes in the text will illustrate, his administration has continued to downplay the importance of environmental interests, although there have been a few positive changes. Just before publication of this edition, the election lost the president the control of Congress. Many see this result as meaning that, at minimum, we will not see as much reduction in environmental protection as we have seen in the recent past.

In finishing the sixth edition of this book, I realize that despite the conscientious review of all stages of the book's production by many people, it is almost inevitable that mistakes have crept in, for which I accept responsibility. I would therefore appreciate readers' corrections and comments as to how future editions may better achieve the goals this book is designed to attain. Please send your comments, criticisms, corrections, or suggestions to me at the Department of Legal Studies, Bowling Green State University, Bowling Green, Ohio 43403, or e-mail me at nkubase@cba.bgsu.edu.

#### CONTENTS

_	

Preface	XI

PART I: AN INTRODUCTION TO THE LAW 1	
CHAPTER 1 The American Legal System: The Source of Environmental Law 3	
Sources of Law 3  The Legislative Branch as a Source of Statutory Law 3  The Judicial Branch as a Source of Case Law 9  The Executive Branch as a Source of Law 11  Administrative Agencies as a Source of Law 14	
Classifications of Law 14  Case and Statutory Law 14  Public and Private Law 14  Criminal Law and Civil Law 15	
Constitutional Principles Underlying the American Legal System Federalism 29 Federal Preemption 30 The Commerce Clause 31 The Fourth Amendment 35 The Fifth and Fourteenth Amendments 36 A Constitutional Right to Environmental Protection? 43	29
Questions for Review and Discussion 47	
For Further Reading 47	
On the Internet 48	
Notes 49	
Resolving Controversial Environmental Issues 51  The Contradictory Behavior of the EPA 51	

#### CHAPTER 2 The Litigation Process and Other Tools for Resolving Environmental Disputes 52

The Adversary System 52

An Introduction to the Adversary System 52

Criticisms of the Adversary System 52

The Federal Court System 55

The State Court System 55

Choice of Courts 57

Primary Actors in the Legal System 60  The Attorney 60  The Judge 60  The Jury 62	
Steps in Civil Litigation 63  The Threshold Issues 63  Pretrial 70  The Trial 74  Appellate Procedure 77	
Alternatives to Civil Litigation 79  Arbitration 80  Mediation 82	
Concluding Remarks 84	
Questions for Review and Discussion 85	
For Further Reading 85	
On the Internet 86	
Notes 86	
Resolving Controversial Environmental Issues	87
Does a Turtle Have More Rights than a Human?	<b>87</b>
CHAPTER 3 Administrative Law and Its Impact on the Environment 89	
Creation of Administrative Agencies 90	
Functions of Administrative Agencies 90 Rule Making 90 Adjudication 96 Administrative Activities 100	
Limitations on Agency Powers 101 Statutory Limitations 101 Institutional Limitations 102	
Important Agencies Affecting the Environment  Executive Versus Independent Agencies 106  Hybrid Agencies 107	106
The Environmental Protection Agency 107 Interagency Cooperation 116	
The Department of the Interior and Its Agencies The Department of Agriculture and Its Agencies The Department of Labor and Its Agencies 121	118 121
Concluding Remarks 122	
Ouestions for Review and Discussion 122	
Questions for Review and Discussion 122	
For Further Reading 122	
Section of the state of the state of the section of	

125

by the People 125	
PART II: THE ENVIRONMENTAL LAWS 127	
CHAPTER 4 An Introduction to Environmental Law and Policy	129
The Need for Regulation 129 Tragedy of the Commons 129 Free-Rider Problem 130 Pollution as an Externality 131 Environmental Ethic 131	
Alternative Ways to Control Pollution 132  Tort Law 132	
Subsidies, Emissions Charges, and Marketable Emissions Permits  Green Taxes 136  Direct Regulation 137	134
Evolution of Our Environmental Policy 138	
The Origins of Our Environmental Policy 138 The 1970s: The Environmental Decade 139 The 1980s 139 The Early 1990s 140 The Middle to Late 1990s 141 Increasing Use of "Market Forces" 144 ISO 14000 145 The Beginning of the 21st Century 146	
National Environmental Policy Act 149  Council on Environmental Quality 150  Environmental Impact Statement 152  Alternatives to the EIS 158  Effectiveness of NEPA 160	
Pollution Prevention Act of 1990 160	
Concluding Remarks 162	
Questions for Review and Discussion 164	
For Further Reading 164	
On the Internet 164	
Notes 165	
Resolving Controversial Environmental Issues 167  The Right to Pollute 167	
CHAPTER 5 Air-Quality Control 168	

168

Resolving Controversial Environmental Issues

In Some Cases, We Do Not Want Power

169

The Major Air Pollutants

Sulfur Dioxide

Nitrogen Oxides 170 Carbon Monoxide 171 Ozone 173 Particulates 173 Lead 174 Airborne Toxins 175	
Some Significant Air-Quality Problems 175 Acid Deposition 175 Depletion of the Ozone Layer 177 Human-Induced Global Climate Change 179 Indoor Pollution 186	
The Initial Approach to Air-Quality Control Air-Pollution Control Act of 1955 188 Motor Vehicle Control Act of 1960 188 Clean Air Act of 1963 188 Motor Vehicle Air-Pollution Control Act of 1965 1967 Air-Quality Act 189	187 189
Current Approaches to Air-Quality Control National Ambient Air-Quality Standards 191 No Significant Deterioration 197 New Source Review 198 Mobile Source Performance Standards 200	190
The 1990 Clean Air Act Amendments 203 1990 Air Toxics Program 203 Acid Rain-Control Program 207 Enforcement of the 1990 Act 208	
The Clear Skies Initiative 210	
Solutions Beyond the Clean Air Act 210	
Concluding Remarks 211	
Questions for Review and Discussion 211	
For Further Reading 212	
On the Internet 212	
Notes 213	
Resolving Controversial Environmental Issues Equal Rights Among Autos 216	216
CHAPTER 6 Water-Quality Control 217	
The Major Water Pollutants 217 Pathogens 218 Conventional Organics 220 Toxic Trace Organics 221 Nutrients 222 Heavy Metals 223	
Ionizing Radiation 223	

Other Measures 224

Some Significant Water-Quality Problems 225
Trace Levels of Toxic Organics 225
Lead and Copper 227
Radon and Other Radionuclides 228
Coastal Contamination 229 Concentrated Animal Feedlots 230
Protecting Water Through Government Actions 230
Water Rights 231
Protecting Surface Water Quality 236
Protecting Groundwater Quality 246
Protecting Drinking Water Quality 248
Concluding Remarks 254
Questions for Review and Discussion 255
For Further Reading 255
On the Internet 256
Notes 256
Resolving Controversial Environmental Issues 259
What Lurks Behind that Faucet 259
CHAPTER 7 Controlling Toxic Substances 261
Identification of Potentially Toxic Substances 261
Scientific Uncertainty 262
Risk Assessment 263
TSCA 268
FIFRA 271
FFDCA 278
FQPA 278
Pesticide Environmental Stewardship Program 280 Progress Under the Acts 280
International Regulation of Toxic Substances 281
Rotterdam Convention 282
Registration, Evaluation, and Authorization of Chemicals 283
Toxic Torts 283
Theories of Recovery 283
Problems in Establishing Causation 285
Enterprise Liability 287 Punitive Damages 288
Concluding Remarks 290
Questions for Review and Discussion 290
For Further Reading 290
On the Internet 291
Notes 291
Resolving Controversial Environmental Issues 294  EPA Too Cautious with Pesticides 294

CHAPTER 8 Waste Management and Hazardous Releases	295
Waste Control Techniques 295  Municipal Solid Waste 301  Hazardous Waste 304  Enforcement of RCRA 312	
CERCLA: An Overview 314	
Emergency Response Plans and Right to Know 314	
Federal Response to Contaminated Sites 317  Removal Action 318  Remedial Response 319  Brownfields 325	
Underground Storage Tank Program 327	
Concluding Remarks 331	
Questions for Review and Discussion 332	
For Further Reading 332	
On the Internet 333	
Notes 334	
Resolving Controversial Environmental Issues 336 As Superfund Turned the Corner? 336 Superfund Summary of Significant Accomplishments 336	
CHAPTER 9 Energy 339	
Energy Policy: A Historical Overview 340  The Crisis Begins 340  A Return to Complacency 342  A Bright Spot: The Energy Policy Act 343  A "Voluntary" Energy Policy 345  Transportation 346  National Energy Policy Plans 347	
Energy Consumption and Production 350	
Coal: The Oldest Energy Source 353  Problems with Coal 355  Regulation of the Mining Industry 357	
Petroleum and Natural Gas 360  Onshore Development Problems 360  Offshore Development Problems 361  Oil Spills 364	
Nuclear Energy 366  History of Nuclear Energy Development 367  Problems with Nuclear Energy 368  Regulation of the Nuclear Industry 370	
Renewable Fuels 372  Hydropower 373	

374 Solar Energy 375 Wind Energy Biomass Energy 376 Geothermal Energy 377 Hydrogen Fuel 377 Concluding Remarks 377 Ouestions for Review and Discussion 378 For Further Reading 378 On the Internet 379 379 Notes Resolving Controversial Environmental Issues 384 Oil is the Best Form of Energy Funds for Alternative Energy Needed 385 CHAPTER 10 Natural Resources 386 **Protecting Public Lands** 386 387 **Forests** Rangelands 388 Regulation of Public Lands 389 Wetlands, Estuaries, and Coastal Areas 395 Benefits of Wetlands 397 Destruction of Wetlands 397 Regulations to Preserve Coastal Areas, Estuaries, and Wetlands 399 Commerce Clause Restrictions on Wetlands Preservation 399 Marine Protection, Research, and Sanctuaries Act Coastal Zone Management Act Coastal Wetlands Planning, Protection, and Restoration Act of 1990 The Convention on Wetlands of International Importance Especially as Waterfowl Habitat 403 "Swampbuster" Provisions of the 1985 Food Security Act 403 National Estuary Program "No-Net-Loss" Policy Estuary Restoration Act of 2000 407 Protection of the Great Lakes 408 Wild and Scenic Rivers System 409 **Endangered Species** 409 The Global Extinction Crisis 416 Concluding Remarks

418

Ouestions for Review and Discussion

Index

478

For Further Reading 418
On the Internet 419
Notes 420
Resolving Controversial Environmental Issues  Ban on Snowmobiles Best Policy for Yellowstone Ban on Snowmobiles Unnecessary  422
CHAPTER 11 International Environmental Law 424
The Need for International Environmental Law 424 Overpopulation 424 Loss of Biological Diversity 427 The Global Commons 428 Environmental Disasters and Transboundary Pollution 430
The Nature of International Law 430
Sources of International Environmental Law 431  Conventional Law 431  Customary Law 432
Institutions that Effectuate and Influence International Environmental Law 434 United Nations 434 World Bank 437 Global Environment Facility 438 European Union 439
Addressing Specific International Environmental Problems  Transboundary Pollution 441  § 902 Interstate Claims and Remedies 442  Choice of Forums 446  The global Commons 448  Preservation of Biological Diversity 456  Madrid Protocol 459  The Future of International Environmental Law 460
Rio Summit 460 Environmentalism and Trade 462
Concluding Remarks 466
Questions for Review and Discussion 467
For Further Reading 467
On the Internet 467
Notes 468
Resolving Controversial Environmental Issues 471  Amend the WTO 471  Process and Production Methods Cannot Be Regulated 472
APPENDIX Abbreviations and Acronyms 473

### PART I

#### AN INTRODUCTION TO THE LAW

A useful prelude to a functional understanding of environmental law is an appreciation of the U.S. legal system itself. The materials contained in Chapters 1 through 3 will help you gain that appreciation.