

**Praise for**  
*Food, Agriculture, and Environmental Law*

“This book is an essential guide for changing the direction and dynamics of a food production system in deep peril. The good news is that we already have a complex structure of policies, laws, and regulations in place that, if properly applied, could help us right the course of American agriculture. *Food, Agriculture, and Environmental Law* may be just the book to inspire a new generation of policymakers, activists, and lawyers to rebuild a food system around the principles of environmental sustainability, social equity, and rural vitality.”

—Daniel Imhoff, Distinguished Author (*Food Fight: The Citizen’s Guide to the Next Food and Farm Bill* and *Farming with the Wild: Enhancing Biodiversity on Farms and Ranches*) and Director at Watershed Media

“This groundbreaking book has arrived in the nick of time to provide a carefully crafted blueprint for what must be done to reform our food and agricultural systems through existing laws and policies. A must read for anyone who enjoys healthy food produced in an ecologically sustainable manner, this book provides a ray of hope in a darkening landscape.”

—Patrick A. Parenteau, Professor of Law and Senior Counsel to the Environmental and Natural Resources Law Clinic, Vermont Law School



# **FOOD, AGRICULTURE, AND ENVIRONMENTAL LAW**

By

Mary Jane Angelo, Jason J. Czarnezki,  
and William S. Eubanks II

ENVIRONMENTAL LAW INSTITUTE

Washington, D.C.

Copyright © 2013 Environmental Law Institute  
2000 L Street NW, Washington, DC 20036

Published April 2013.

Printed in the United States of America  
ISBN 978-1-5876-160-9

# Table of Contents

<b>About the Editors</b> .....	xiii
<b>Contributing Authors</b> .....	xv
<b>Other Contributing Authors</b> .....	xvii
<b>Chapter 1—A Brief History of U.S. Agricultural Policy and the Farm Bill</b> .....	1
<i>A. How Our Agricultural Policy Has Evolved: A Nation’s Time Line Through an Agricultural Prism</i> .....	1
1. From Jeffersonian Agrarianism to the Great Depression.....	1
2. The “Temporary” Safety Net: The Creation of the Farm Bill .....	2
3. The Post-World War II Boom: Maximizing Yields and New Technology ...	4
4. The 1980s Farm Crisis and Congress’ Response .....	7
5. Recent History: Decoupling and Beyond .....	8
<i>B. How Agricultural Policy Has Shaped the Modern Farm Economy, and How Historical Trends Can Help Us Predict the Policy Future</i> .....	10
<i>Conclusion</i> .....	12
<b>Chapter 2—An Overview of the Modern Farm Bill</b> .....	13
<i>A. The Food, Conservation, and Energy Act of 2008: Key Provisions and Programs Impacting the Environment</i> .....	14
1. Title I: Commodities .....	14
2. Title II: Conservation .....	21
3. Title IX: Energy.....	25
4. Title X: Horticulture and Organic Agriculture.....	29
<i>B. Environmental Implications of Farm Bill Programs</i> .....	30
<i>C. Looking Toward the Future: Trends and Issues for Upcoming Farm Bill Legislation</i> .....	31
1. Budgetary Considerations.....	31
2. Trade Considerations.....	32
3. Policy Considerations.....	33
<i>Conclusion</i> .....	33
<b>Chapter 3—The Environmental Impacts of Industrial Fertilizers and Pesticides</b> .....	35
<i>A. History of Pesticide and Fertilizer Use</i> .....	35
<i>B. Environmental Risks of Pesticides</i> .....	39
<i>C. Environmental Risks of Fertilizers</i> .....	44
<i>D. Other Considerations Prompted by Pesticide and Fertilizer Use</i> .....	48
1. Carbon Footprint/Energy Usage.....	48
2. Groundwater Contamination.....	49

3. Sustainable Pest Management and Fertilization .....	49
<i>Conclusion</i> .....	50
<b>Chapter 4—Agricultural Irrigation</b> .....	51
<i>A. Irrigation in Practice</i> .....	52
1. Background .....	52
2. Field Drainage: Purposes .....	54
3. Field Drainage: Techniques .....	55
<i>B. The Potential Environmental Effects of Agricultural Irrigation</i> .....	57
1. Runoff From Farm Fields .....	58
2. Groundwater Pumping .....	58
3. Responding to Environmental Impacts: Law and Policy .....	59
<i>C. Other Factors Affecting the Impact of Irrigation</i> .....	60
1. Shift to Large, Integrated Farm Operations .....	60
2. Conversion of Rangeland to Irrigation .....	60
3. Conversion of Wetlands to Irrigated Farmland .....	60
4. Climate Change and Variability .....	61
<i>D. Irrigation's Challenges and Opportunities</i> .....	61
1. Reducing Polluted Return Flows .....	61
2. Water Conservation .....	62
<i>Conclusion</i> .....	62
<b>Chapter 5—The Industrialization of Animal Agriculture: Connecting a Model With Its Impacts on the Environment</b> .....	65
<i>A. Growth and Consolidation of the Livestock and Poultry Industry</i> .....	66
<i>B. Livestock Production Models</i> .....	68
1. Production Area .....	68
2. Land Application .....	72
<i>C. Environmental Impacts of Industrial Animal Production</i> .....	72
1. Water Pollution and Water Scarcity .....	73
2. Air Pollution and Climate Change .....	82
3. Land Degradation .....	89
4. Loss of Biodiversity .....	90
5. Environmental Injustice .....	91
<i>Conclusion</i> .....	91
<b>Chapter 6—Genetically Modified Organisms and the Environment</b> .....	93
<i>A. Genetically Modified Plants</i> .....	93
1. What Is a GM Plant? .....	94
2. Benefits of GM Plants .....	95

3.	Risks and Concerns .....	96
4.	Environmental Risks .....	97
5.	Regulation of GM Plants .....	99
6.	Case Study: Alfalfa.....	101
B.	<i>GM Animals</i> .....	103
1.	Background.....	103
2.	Benefits.....	103
3.	Risks and Concerns .....	104
4.	Regulation of GM Animals in the United States .....	105
5.	Case Study: AquaBounty Salmon .....	107
6.	Labeling for GM Salmon?.....	110
	<i>Conclusion</i> .....	111
<b>Chapter 7—Environmental and Climate Impacts of Food Production, Processing, Packaging, and Distribution .....</b>		<b>113</b>
A.	<i>Food, Agriculture, and the Environment</i> .....	114
B.	<i>Industrialized Food Production and Cultivation .....</i>	116
1.	Mechanized Cultivation and Irrigation.....	117
2.	Pesticides and Fertilizers.....	119
3.	Monoculture .....	122
C.	<i>Food Processing .....</i>	123
1.	High Fructose Corn Syrup, Commodity Crops, and the Farm Bill.....	123
2.	Greenhouse Gas Emissions and Air Pollution .....	124
3.	Wastewater Pollution.....	124
D.	<i>Food Packaging</i> .....	125
E.	<i>Food Distribution</i> .....	127
1.	Food Miles.....	127
2.	Importing Food .....	127
	<i>Conclusion</i> .....	128
<b>Chapter 8—The Federal Insecticide, Fungicide, and Rodenticide Act .....</b>		<b>129</b>
A.	<i>History and Provisions of the Federal Insecticide, Fungicide, and Rodenticide Act</i> .....	130
1.	History of the Act .....	130
2.	Registration.....	130
3.	Data Requirements.....	131
4.	Regulation of Pesticide Use.....	132
5.	Restricted-Use Pesticides .....	133

6.	Other Approval Mechanisms .....	133
7.	Continuing Duties of Registrants.....	134
8.	Cancellation and Suspension.....	135
B.	<i>FIFRA's Strengths and Limitations</i> .....	136
1.	Strengths.....	137
2.	Weaknesses.....	138
C.	<i>Recent Legal Developments</i> .....	141
D.	<i>Encouraging Reduced-Risk Pesticides</i> .....	144
	<i>Conclusion</i> .....	145
	<b>Chapter 9—Agriculture and the Clean Water Act</b> .....	147
A.	<i>A Brief Overview</i> .....	147
B.	<i>The Clean Water Act</i> .....	149
1.	The National Pollutant Discharge Elimination System Permitting Program .....	149
2.	Standards for Effluent Limitations and Water Quality .....	155
3.	Animal Feeding Operations and Concentrated Animal Feeding Operations .....	156
4.	Aquaculture.....	158
5.	Wetlands Regulation Under CWA §404.....	158
	<i>Conclusion</i> .....	161
	<b>Chapter 10—Agriculture and the Clean Air Act</b> .....	163
A.	<i>Clean Air Act</i> .....	164
1.	National Ambient Air Quality Standards and State Implementation Plans.....	164
2.	New Source Review and Title V Permits .....	166
3.	NSPS Program .....	167
4.	Hazardous Air Pollutant Program.....	168
B.	<i>Reporting Requirements Under EPCRA and CERCLA</i> .....	169
C.	<i>Enforcement Issues</i> .....	171
1.	Initial Enforcement Actions .....	171
2.	EPA's Consent Agreement .....	173
D.	<i>State Efforts</i> .....	176
1.	State Authority.....	176
2.	State Permitting .....	177
3.	State Air Quality Standards.....	179
4.	Other State Requirements .....	181
E.	<i>Greenhouse Gas Controls</i> .....	181
1.	PSD and Title V Permitting .....	182



2.	NSPS and Mobile Source Rules .....	182
3.	State and Regional Measures .....	183
	<i>Conclusion</i> .....	183
<b>Chapter 11—Agriculture and the Endangered Species Act</b> .....		<b>185</b>
A.	<i>The ESA: Statutory and Regulatory Framework</i> .....	185
1.	Background .....	185
2.	Section 4—The Listing Process .....	186
3.	Section 9—The Take Prohibition .....	187
4.	Sections 7 and 10—Interagency Consultation and Incidental Take Permits .....	188
5.	ESA Litigation .....	190
B.	<i>Application of the ESA to Crop-Based Agricultural Inputs</i> .....	191
1.	Crop Seeds .....	192
2.	Fertilizers .....	194
3.	Irrigation .....	198
4.	Pesticides .....	201
C.	<i>Application of the ESA to Animal Agriculture and Nonplant GE Foods</i> .....	203
1.	Concentrated Animal Feeding Operations .....	203
2.	Nonplant GE Foods .....	204
	<i>Conclusion</i> .....	205
<b>Chapter 12—Agriculture, Food, and the National Environmental Policy Act</b> .....		<b>207</b>
A.	<i>NEPA's Statutory and Regulatory Framework</i> .....	207
1.	Background .....	207
2.	An Environmental Impact Statement or an Environmental Assessment? .....	208
3.	Federal Agency Obligations in an EIS .....	209
4.	NEPA Litigation .....	210
B.	<i>NEPA as Applied to Agriculture and Food</i> .....	211
1.	Programmatic NEPA Review of the Farm Bill .....	212
2.	NEPA Review of Independent Statutory Processes .....	217
	<i>Conclusion</i> .....	222
<b>Chapter 13—The Food Statutes</b> .....		<b>223</b>
A.	<i>Public Health and Safety</i> .....	223
1.	The Federal Food, Drug, and Cosmetic Act and the Food Quality Protection Act .....	224
2.	The Food Safety Modernization Act of 2010 .....	226

<i>B. Organic Food and Labeling</i> .....	228
1. The OFPA.....	228
2. Country of Origin Labeling Provisions of the 2002 Farm Bill.....	232
<i>C. The National School Lunch Program</i> .....	233
1. Origins of the National School Lunch Program.....	234
2. 2010 Reauthorization of the Child Nutrition Act.....	235
3. Role of the USDA in the NSLP.....	236
4. Challenges to the NSLP.....	237
5. Successful Reform Programs.....	239
<i>Conclusion</i> .....	240
<b>Chapter 14—Agriculture and Ecosystem Services: Paying Farmers to Do the New Right Thing</b> .....	241
<i>A. Promoting Farm Multifunctionality</i> .....	244
1. The Ecology and Economics of Farm Multifunctionality.....	244
2. Conceiving Alternative Futures for Agricultural Lands.....	247
3. Policy Instruments.....	248
<i>B. Designing PES and TDR Programs for Agricultural Ecosystem Services</i> .....	251
1. General Design Features.....	252
2. Designing Agricultural PES Programs.....	253
3. Designing Agricultural TDRs for Ecosystem Service Enhancement.....	254
4. Matching PES and TDR Programs With Context.....	258
<i>Conclusion</i> .....	259
<b>Chapter 15—Achieving a Sustainable Farm Bill</b> .....	263
<i>A. Seeking a Truly “Green” Revolution: Large-Scale Reform for Widespread Problems</i> .....	263
1. Why a Fundamental Shift Will Work: Sustainable Agriculture Already Exists on a Small Scale.....	266
2. Scaling Up Sustainable Agriculture With Significant Reform of Farm Bill Commodity Subsidies.....	269
<i>B. Breathing New Life Into the Farm Bill: Life by a Thousand Cuts</i> .....	270
1. Eliminating or Limiting Commodity Payments and Crop Insurance Payments.....	271
2. Putting the Flexible Back in Planting Flexibility.....	272
3. Reestablishing Conservation Compliance Conditions on Federal Crop and Revenue Insurance Payments.....	273
4. Ensuring Adequate Funding for the Conservation Stewardship Program and Eliminating Barriers to Enrollment in the Program.....	275

5.	Prioritizing Organic Agriculture Through Funding, Research, and Targeted Set-Asides .....	276
6.	Bolstering Local and Regional Food Systems .....	277
	<i>Conclusion</i> .....	279
<b>Chapter 16—Regulating Transgenic Crops Pursuant to the Plant Protection Act</b> .....		281
A.	<i>Agricultural Biotechnology</i> .....	282
B.	<i>The Impacts of Transgenic Crops</i> .....	284
C.	<i>USDA Oversight of Transgenic Crops</i> .....	286
D.	<i>Applying the Plant Protection Act to Transgenic Crops</i> .....	290
1.	Applying the PPA’s Plant Pest Authority .....	291
2.	Transgenic Contamination and Economic Impacts Under the Noxious Weed Authority .....	292
3.	The Noxious Weed Authority and HR Weeds .....	292
4.	Following EPA’s Example .....	293
5.	Integrated Resistance Management .....	294
6.	Updating USDA’s Scope of Authority .....	295
7.	Including Public Health Assessment .....	295
8.	Implementing USDA’s Authority to Promulgate Partial Deregulations and Continuing Post-Market Oversight .....	296
	<i>Conclusion</i> .....	298
<b>Chapter 17—The Future of Food Eco-Labeling: A Comparative Analysis</b> .....		301
A.	<i>Food and the Environment</i> .....	303
1.	Agricultural Practices .....	303
2.	Livestock and Fishing Industries .....	304
3.	Food Processing and Distribution Systems .....	305
B.	<i>Environmental Labeling Regimes for Food in the United States and Europe</i> .....	306
1.	Organic Labeling .....	306
2.	Carbon Footprint Labeling .....	308
3.	Country of Origin Labeling and Other Food Labels .....	309
C.	<i>The Swedish Experiment</i> .....	310
1.	Swedish Dietary Guidelines .....	310
2.	Klimatmärkning för Mat (Climate Labeling for Food) .....	311
D.	<i>Environmental Federalism in the United States and Europe</i> .....	314
1.	The Merits of Federal Legislation .....	315
2.	A State-Sponsored Eco-Label in the United States .....	316

3. Environmental Life-Cycle Analysis .....	319
4. Implementing an Eco-Labeling Program .....	321
<i>Conclusion</i> .....	323
<b>Chapter 18—Into the Future: Building a Sustainable and Resilient Agricultural System for a Changing Global Environment</b> .....	<b>325</b>
<i>A. The Link Between Agriculture and Climate Change</i> .....	325
<i>B. Agriculture’s Contribution to Climate Change</i> .....	326
<i>C. Climate Change Impacts on Agriculture</i> .....	327
<i>D. Adapting to Climate Change</i> .....	328
1. Ecological Resilience .....	329
2. Building a Sustainable and Resilient Agro-Ecosystem .....	330
<i>E. Policy Solutions</i> .....	331
<i>Conclusion</i> .....	332
<b>Index</b> .....	<b>333</b>

## About the Editors

### *Mary Jane Angelo*

Mary Jane Angelo is a Professor of Law, Director of the Environmental and Land Use Law Program, and University of Florida Research Foundation Professor at the University of Florida Levin College of Law. She is also Affiliate Faculty in both the University of Florida School of Natural Resources and Water Institute. Mary Jane has published extensively on a variety of environmental law topics including pesticide law, endangered species law, water and wetlands law, sustainable agriculture, the regulation of genetically modified organisms, and the relationship between law and science. Her articles have been published in the *Texas Law Review*, the *Wake Forest Law Review*, the *George Mason Law Review*, the *Harvard Environmental Law Review*, *Ecology Law Quarterly*, and *Environmental Law*. Her forthcoming book, *The Law and Ecology of Pesticides and Pest Management*, will be published by Ashgate Publishing in 2013. Mary Jane serves on two National Academy of Sciences, National Research Council Committees: The Committee on Independent Scientific Review of Everglades Restoration Progress; and the Committee on Ecological Risk Assessment under FIFRA and the ESA. Mary Jane is also a member of the Vermont Law School summer faculty and has taught and lectured throughout the United States and other parts of the world, including Belize, Brazil, Costa Rica, Poland, and Uruguay. She is also a Member-Scholar with the Center for Progressive Reform in Washington, D.C. Prior to joining academia, Mary Jane practiced as an environmental lawyer for many years. She served in the U.S. Environmental Protection Agency Office of the Administrator and Office of General Counsel in Washington, D.C., and as Senior Assistant General Counsel for the St. Johns River Water Management District in Florida. Her substantial environmental law practice has included water law, wetlands law, endangered species law, pesticides law, biotechnology law, and hazardous and toxic substances law. Mary Jane received her B.S., with High Honors, in biological sciences from Rutgers University, and both her M.S., in Entomology, and J.D., with Honors, from the University of Florida.

### *Jason J. Czarnecki*

Jason Czarnecki is, as of the 2013-2014 academic year, the Gilbert & Sarah Kerlin Distinguished Professor of Environmental Law at Pace Law School. Prior to joining the Pace Law faculty, he was Professor of Law in the Environmental Law Center at Vermont Law School and faculty director of the U.S.-China Partnership for Environmental Law. He also has held academic appointments at Marquette University Law School and the DePaul University College of Law. Jason also served as a guest researcher at Uppsala University in Sweden in 2011 and spent the 2009-2010 academic year as a J. William Fulbright Scholar at Sun Yat-Sen University in Guangzhou, China. He has presented his work on environmentalism, natural resources law, food policy, and global climate policy at universities, public interest organizations, government institutions, and conferences throughout the United States, Europe, and Asia. Previously, he served as a law clerk to the Hon. D. Brock Hornby of the U.S. District Court for the District of Maine and as a law clerk for the Bureau of Legal Services at the Wisconsin Department of Natural Resources. His articles have been published in the law journals of Boston College, Boston University, Stanford University, the University of Chicago, the University of Colorado, the University of Maryland, and the University of Virginia, and he is the author of *Everyday Environmentalism: Law, Nature and Individual Behavior* (ELI 2011). Jason received his undergraduate and law degrees from the University of Chicago.

### *William S. Eubanks II*

Bill Eubanks is a partner at one of the nation's leading public interest environmental law firms, Meyer Glitzenstein & Crystal, where he litigates complex federal environmental cases on behalf of conservation organizations under the Endangered Species Act, National Environmental Policy Act, Clean Water Act, National Park Service Organic Act, and other statutes. Cases on which he has worked include challenging *Deepwater Horizon* oil spill response strategies harming sea turtles, garnering protections for endangered Indiana bats from an industrial wind energy project, obtaining agency records regarding federal financing of coal-fired power facilities, forcing a reconsideration of critical habitat for the California tiger salamander,

reducing off-road vehicle use in Florida's Big Cypress National Preserve, and co-authoring several amicus briefs in the U.S. Supreme Court on standing and remedies in environmental cases involving climate change, genetically modified crops, and naval sonar use. Among other topics, Bill has also written and lectured extensively about the environmental and public health impacts of agricultural policy and examined various proposals to create more sustainable and resilient food systems. Bill serves as an Adjunct Professor of Law at Vermont Law School and an Adjunct Associate Professor of Law at American University's Washington College of Law, where he teaches courses on environmental law, food systems, and agricultural policy. Bill received his undergraduate degree from the University of North Carolina at Chapel Hill; his law degree, magna cum laude, from North Carolina Central University School of Law; and his LL.M. in Environmental Law, summa cum laude, from Vermont Law School.

## Contributing Authors

### *Teresa Clemmer*

Teresa Clemmer is an attorney with extensive experience in environmental and natural resources law, including air quality, water quality, wetlands, oil spill prevention and response, contaminated site cleanup, solid and hazardous waste management, public lands, natural resource management, and endangered species. She is presently a member of the law firm of Besseney & Van Tuyn, LLC, in Anchorage, Alaska, representing conservation-minded clients in a wide range of matters and projects. Before joining the firm, Teresa spent four years as a law professor at Vermont Law School, helping to train the next generation of environmental lawyers. She taught courses on air pollution and environmental law, served as acting director of the Environmental and Natural Resources Law Clinic, and published scholarly work relating to climate change. Before her adventures in academia, Teresa practiced environmental law with the law firms of Cooper, White & Cooper LLP and Perkins Coie, and later as a staff attorney with the nonprofit Trustees for Alaska. Teresa's achievements include successful litigation prompting EPA to update its outdated national air pollution standards for nitric acid plants; successful litigation preventing the construction of a liquefied natural gas terminal on Passamaquoddy tribal lands in Maine, which posed a threat to both Passamaquoddy culture and endangered Northern right whales; and successful advocacy before the U.S. Army Corps of Engineers to protect communities and ecologically sensitive areas of Puerto Rico from the harmful effects of a proposed natural gas pipeline. Teresa received her law degree from Georgetown University and her undergraduate degree from Princeton University.

### *Hannah Connor*

Hannah M. M. Connor is an attorney in the Animal Protection Litigation section of the Humane Society of the United States. Her principal practice areas include environmental, administrative, and animal law. Ms. Connor is committed to employing laws, including the Clean Water Act, the Clean Air Act, the Emergency Planning and Community Right-to-Know Act, and the National Environmental Policy Act, to further the rights of communities, animals, and the natural environment by addressing and preventing the harms caused by the industrialization of animal agriculture and encouraging healthy ecosystems by supporting sustainable food systems. She has written, presented, and litigated on a range of issues relating to the industrialization of animal agriculture. Prior to joining the Humane Society in 2011, Ms. Connor was an attorney with the Waterkeeper Alliance. She received her undergraduate degree from Boston College and her law degree from Vermont Law School.

### *John H. Davidson*

John Davidson is President of the Northern Prairies Land Trust and a law professor at the University of South Dakota School of Law, a position he has held since 1972. He has authored numerous articles, law casebooks, and treatises in the fields of agricultural law, water and irrigation law, and environmental law. In 1995, President William J. Clinton appointed John to the Western Water Policy Review Commission. He has long held an association with the conservation movement, including several terms on the Board of the South Dakota Association of Conservation Districts, and his involvement in pro bono environmental litigation has been continuous since the early 1970s. He has taught the course titled Agriculture and the Environment at the Vermont Law School. He received his undergraduate degree from Wake Forest University, his law degree from the University of Pittsburgh School of Law, and his LL.M. in Natural Resources from the George Washington University Law School.

### *George Kimbrell*

George Kimbrell is Senior Attorney for the Center for Food Safety (CFS), where he practices environmental and administrative law. George's litigation and policy work spans a broad range of CFS program areas, including: genetically engineered (GE) foods; transgenic plants, trees and animals; food labeling; food safety and contamination; organic standards; factory farming pollution; aquaculture; pesticides; agri-

cultural patent law; and nanotechnology. One of his cases, *Monsanto v Geertson Seed Farms* (2010), was the first U.S. Supreme Court case on the oversight of agricultural biotechnology. George also serves as an Adjunct Professor of Law at Lewis and Clark Law School, where he teaches food and agriculture law. He has written and presented extensively on a range of issues related to industrial agriculture's impacts on the environment. George joined CFS upon completing a clerkship with the Honorable Ronald M. Gould, U.S. Court of Appeals for the Ninth Circuit. He received his undergraduate degree, cum laude, from the College of William and Mary, and his law degree, magna cum laude, from Lewis and Clark Law School.

### ***J.B. Ruhl***

J.B. Ruhl is the David Daniels Allen Distinguished Chair in Law at Vanderbilt University Law School, where he teaches courses in environmental law, natural resources law, and property. Before he joined Vanderbilt's law faculty in 2011, he was the Matthews & Hawkins Professor of Property at the Florida State University College of Law, where he had taught since 1999. His influential scholarly articles on environmental law relating to climate change, the Endangered Species Act, ecosystems, federal public lands, and other land use and environmental issues have appeared in the *California Law Review*, the *Georgetown Law Review*, the *Stanford Law Review*, the *Duke Law Review*, the *Environmental Law Reporter*, the *Vanderbilt Law Review*, and the specialty environment journals at several top law schools, among other journals. His works have been selected among the best law review articles in the field of environmental law seven times from 1989 to 2012. Over the course of his career, he has been a visiting professor at Harvard Law School, Vermont Law School, George Washington University Law School, the University of Texas Law School, and Lewis & Clark College of Law. He began his academic career at the Southern Illinois University School of Law, where he taught from 1994-1999 and earned his Ph.D. in geography. Before entering the academy, he was a partner with Fulbright & Jaworski in Austin, Texas, where he also taught on the adjunct faculty of the University of Texas Law School.



## Other Contributing Authors

### *James Choate*

James Choate holds an LL.M. in Environmental and Land Use Law from the University of Florida, a J.D. from Stetson University College of Law, and a B.S. in Wildlife Ecology & Conservation from the University of Florida. He currently works as an attorney for the U.S. Army Corps of Engineers in Charleston, South Carolina.

### *Seth Hennes*

Seth Hennes, originally from Florida, currently resides in Washington, D.C., where he has worked on a wide variety of environmental issues. He graduated from Wake Forest University with a B.A. in Political Science in 2003. Seth earned his J.D. from Tulane Law School in 2006 and his LL.M. in Environmental and Land Use Law from the University of Florida Levin College of Law in 2011.

### *Elena Mihaly*

Elena Mihaly graduated with a degree in Environmental Science from Colorado College and earned a J.D. and master's degree in Environmental Law and Policy from Vermont Law School in 2013. She has researched and written in the field of food and agriculture policy, including a publication titled, "A Farmer's Handbook to Energy Self-Reliance." Beginning in September 2013, she will be working on sustainable agriculture policy at the Conservation Law Foundation.

### *Emily Montgomery*

Emily Montgomery currently works for the state of Vermont and holds an LL.M. in Environmental and Natural Resources Law from the S.J. Quinney College of Law at the University of Utah, a J.D. from Vermont Law School, and a B.A. in Environmental Studies from Gettysburg College.

### *Elisa Prescott*

Elisa Prescott, originally from Vermont, received her B.A. in Environmental Sociology from St. Lawrence University in 2008 and a master's degree in Environmental Law and Policy from Vermont Law School in 2011. Elisa currently lives in Bozeman, Montana, where she continues to work on agriculture and environmental-related issues in rural communities.

### *Joanna Reilly-Brown*

Joanna Reilly-Brown holds a J.D. and Certificate in Environmental and Land Use Law from the University of Florida Levin College of Law, an M.A. in Environmental Anthropology, and a B.A. in Anthropology from the University of Florida. She currently resides in Florida, where she continues to research and write about agriculture and environmental issues.