



# Environmental Regulation:

Law, Science & Policy – 9th edition

## Transition Guide for the 9th Edition

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Environmental Regulation: Law, Science & Policy, 9th Edition

Transition Guide from the Eighth Edition to the Ninth Edition

The Ninth Edition of *Environmental Regulation: Law, Science & Policy* comprehensively revises and updates the Eighth Edition. Several new cases have been added, Problem Exercises have been revised, and existing material in the casebook has been thoroughly updated. This edition covers efforts by the Biden administration to reverse significant deregulatory initiatives launched by the Trump administration and to adopt an “all of government” approach to climate change and environmental justice issues. Emerging environmental problems such as PFAS contamination are introduced with emphasis on how they expose crucial gaps in our regulatory infrastructure. Professors who previously used the Eighth Edition will be happy to know that there are no significant structural changes in the new edition. They also will be pleased to learn that the book has been streamlined by pruning outdated and less relevant material to make it more compact and user-friendly.

Highlighted below are the most significant new additions to the Ninth Edition, followed by a detailed chapter-by-chapter listing of the changes.

## Most Significant Changes

### Broad Changes

- This edition covers the Biden Administrations’ actions to reverse significant deregulatory initiatives by the Trump administration and to tackle climate change and environmental justice problems.
- Excerpts from significant new court decisions have been added, including Supreme Court decisions interpreting CERCLA, the Clean Water Act, the Endangered Species Act, the International Organizations Immunity Act, and lower court decisions on climate change and the Clean Air Act.
- Environmental justice problems are now emphasized throughout the casebook.
- This edition introduces the problem of widespread PFAS contamination and how it exposes crucial gaps in our supposedly comprehensive regulatory infrastructure.
- The impact of the COVID-19 pandemic and how habitat degradation can contribute to zoonosis are discussed.
- Corporate environmental initiatives and the Business Roundtable’s declaration on the purpose of corporations are discussed.
- This edition is more compact and user-friendly due to pruning of outdated and less relevant material.

## More Specific Significant Updates

- A new section on Environmental Justice has been added to Chapter 1, including discussion of the history of the environmental justice movement, principles of environmental justice and legal responses to environmental justice problems.
- Efforts to establish constitutional environmental rights are discussed and the 9<sup>th</sup> Circuit's *Juliana v. United States* opinion is now included in Chapter 2.
- How PFAS evaded TSCA regulation is discussed in Chapter 3.
- An excerpt from the Supreme Court's 2020 *Atlantic Richfield Company v. Christian* decision has been added to Chapter 4 in an updated section called "The CERCLA Remediation Process and State Law Remedies."
- An excerpt from the D.C. Circuit's 2021 *American Lung Ass'n v. EPA* decision striking down the Trump administration's effort to replace the Obama EPA's Clean Power Plan has been added.
- A subsection entitled "Do Discharges That Pass Through Groundwater Require a Permit?" has been added to Chapter 6. This new section includes an excerpt from the Supreme Court's 2020 *County of Maui v. Hawaii Wildlife Fund* decision.
- The effect of racial redlining on land use patterns and its implications for environmental justice problems such as urban heat islands in minority neighborhoods has been added to Chapter 7.
- The Trump administration's efforts to "streamline" the NEPA process by issuing new NEPA regulations is discussed throughout the Chapter 8.
- Revisions to ESA regulations adopted by the Trump administration are discussed in Chapter 9 and an excerpt from the Supreme Court's *Weyerhaeuser Co. v. U.S. Fish and Wildlife Service* decision has been added to the "Critical Habitat Designation" section.
- Chapter 10 highlights former EPA enforcement chief Cynthia Giles's new, hard-hitting critique of environmental compliance gaps. The new edition also discusses the reversal of the Trump administration's effort to ban supplemental environmental projects in enforcement settlements and court decisions seeking to "atomize" environmental standing are discussed in Chapter 10.
- The state of global efforts to control greenhouse gas emissions (GHGs) is discussed and an excerpt from the Supreme Court's *Jam* decision allowing environmental suits against international organizations is discussed in Chapter 11.
- A new section on "Private Environmental Governance" is added to Chapter 12 including the Business Roundtable's declaration on the purpose of corporations.

## More Specific Changes by Chapter

### Chapter 1- Environmental Values and Policies

- Zoonosis and the COVID-19 pandemic is discussed in the introductory materials.
- Census data, global population statistics, and Ecological Footprint trend numbers have been updated.
- Information about the 93 environment-related indicators of the UN's Sustainable Development Goals has been expanded and updated. This includes information about a December 2020 UNEP report that "the nations of the world are not on track to meet even their weak initial nationally determined contributions (NDCs) to reducing greenhouse gas emissions (GHGs) pursuant to the Paris Agreement."

- Discussion of the Trump administration's efforts to weaken environmental protection measures and the Biden Administration's efforts to reverse these policies has been added to the end of the "Environmental Problems and Progress" section.
- A new section on Environmental Justice has been added to Chapter 1. It includes a review of the history of the environmental justice movement, including environmental justice problems at the Gray's Ferry neighborhood of Philadelphia exposed to emissions from a nearby refinery. It also includes Principles of Environmental Justice from the First National People of Color Environmental Leadership Summit, and legal responses to environmental justice problems, including discussion of state laws in New Jersey and Virginia and the 4<sup>th</sup> Circuit's *Friends of Buckingham* decision.
- The Cost-Benefit Analysis Section has been updated to include actions by the Obama, Trump, and Biden Administrations, including the text of President Biden's Executive Order 13,990 and a discussion of the controversy over estimates of the social cost of carbon.
- A note has been added following "The Tragedy of the Commons" excerpt acknowledging Hardin's repugnant racial and social views and how his writings supported anti-immigrant hatred.
- The Problem Exercise has been edited to explore controversies over fossil fuel extraction, including ANWR, the Keystone XL and Dakota Access pipelines, and fracking initiatives.

## Chapter 2 – Environmental Law: A Structural Overview

- The discussion of the history of environmental regulation has been updated to reflect the deregulatory efforts of the Trump administration and the subsequent policy shift after the inauguration of President Biden.
- Language was added to Note One following the *Madison v. Ducktown Sulphur, Copper & Iron Co.* case discussing the environmental justice implications of refusing to stop pollution that affects less valuable properties.
- A new subsection entitled "Private Nuisance Actions Against Industrial Hog Farms" was added to the "Private Nuisance" section. It discusses the nuisance law and environmental justice implications of modern concentrated animal feeding operations (CAFOs) and includes an excerpt from the 4<sup>th</sup> Circuit's 2020 *McKiver v. Murphy-Brown* decision concerning the effect of right-to-farm laws on CAFO liability.
- "Six Stages in the History of U.S. Environmental Law" has been expanded to nine to reflect sharp policy shifts during the Obama, Trump and Biden administrations.
- A note on state law climate litigation has been added and the Supreme Court's 2021 decision on removal of state climate litigation to federal courts in *BP PLC v. Mayor and City Council of Baltimore* is discussed.
- The notes following *Massachusetts v. EPA* have been revised to reference Richard Lazarus' 2020 book *the Rule of Five* and how the current makeup of the Supreme Court might produce a different result today.
- An excerpt from the Ninth Circuit's 2020 *Juliana v. United States* case has been added along with notes and comments for discussion.
- In the section on "Environmental Federalism: Three models of Federal-State Relations," a discussion of the Supreme Court's 2019 decision in *Virginia Uranium v. Warren* has been added.
- The excerpt from the *New York v. United States* opinion has been replaced with a condensed overview of the case and discussion of the "anti-commandeering" doctrine.
- The Case Study "Liability, Regulation, and the Prevention and Remediation of Oil Spills" has been condensed.
- Updates regarding the Biden Administration's revocation of Executive Order 13,795 have been added to Note 7 following the section entitled "Provisions of The Oil Pollution Prevention, Response, Liability, and Compensation Act of 1990."

- The “Regulatory Options” and “Assessing Regulatory Strategies and Their Effect on Technological Innovation” sections in the “Comparing Regulatory Strategies” section have been updated and condensed for clarity.
- “The Congressional Review Act” Section under the “The Regulatory Process” also has been condensed for clarity. This includes removing the “Reforming Rulemaking,” “Generic Approaches to Rulemaking,” and “Reinventing Regulation” sections.
- The *Sierra Club v. Costle* opinion has been removed and replaced with a brief overview of the case and holding, as well as subsequent actions taken by the Obama, Trump, and Biden Administrations.
- Two notes have been added following the *Chevron U.S.A. v. Natural Resources Defense Council* case. They discuss more recent case law addressing judicial deference to agencies, including *Kisor v. Wilkie* and *County of Maui v. Hawaii Wildlife Fund*. Additionally, the notes also now include a brief discussion of the role of judicial review in stymieing efforts by the Trump administration to roll back environmental regulations.

## Chapter 3—Preventing Harm in the Face of Uncertainty

- This chapter has been significantly condensed to focus on its most important topics, while simultaneously adding information about PFAS and updates from the Trump and Biden Administrations.
- The *Reserve Mining Company v. EPA* opinion has been shortened to remove the lengthy descriptions of three studies and an additional discussion on exposure levels. A note following the excerpt has been added discussing the aftermath of the *Reserve* decision before discussing the *Ethyl* decision in the next section.
- A section header “Uncertainty and the Precautionary Principle” has been added.
- A Section entitled “Consideration of Costs After Benzene: *American Textile* and *Michigan v. EPA*” has been added following the discussion of the *Benzene* case in Chapter 3. This section includes an excerpt from the Supreme Court’s 2015 decision in *Michigan v. EPA*, along with notes and discussion, which have been moved from a different section of the same chapter.
- The section “What we know about Toxics Exposures” has been updated to “Chemical Testing and Information about Chemicals.”
- A section entitled “PFAS, TSCA and Chemical Testing” has been added.
- The *Corrosion Proof Fittings v. EPA* case has been edited to focus on its most relevant parts. The notes following the case have similarly been condensed, with some of the later notes being moved to the subsequent section on “The Frank R. Lautenberg Chemical Safety for the 21<sup>st</sup> Century Act.”
- The “Frank R. Lautenberg Chemical Safety for the 21<sup>st</sup> Century Act” Section includes several updates, including actions from the Trump and Biden Administrations and a new notes and comments section reflecting these updates.
- The Section entitled “Technology Based (Feasibility Limited) Regulation” has been edited into two separate sections, one on OSHA and one on the SDWA. Notes and comments have been added and edited to cover each law individually.
- The Section “Health Based Regulation” has been renamed “The Delaney Clauses of the Federal Food Drug and Cosmetic Act” and has been edited to reflect this more specific topic. Sections have been renamed to discuss “FIFRA, Pesticide Residues on Food and the Food Quality Protection Act” and “Hazardous Air Pollutants and Section 112 of the Clean Air Act” separately.
- The “Sound Science” Debates section has been removed following the Problem Exercise, along with the Radon Case Study and accompanying figures.
- The “California’s Proposition 65: A Burden-Shifting Approach to the Information Problem” section has been updated to include information on PFAS.
- The notes following the excerpt “James Hamilton, Regulation through Revelation” have been edited to include new questions and notes regarding recent legislative provisions and information on EPCRA’s warning label requirements.

## Chapter 4- Waste Management and Pollution Prevention

- Figures and statistics on waste generation and management were updated throughout the chapter to reflect more recent data.
- Information about the Coal Ash Rule and *Utility Solid Waste Activities Group v. EPA* was added to the introductory section of the chapter.
- The Notes and Questions following the “Identifying “Hazardous Waste”” section have been edited to include updates discussing PFAS.
- The notes following the *City of Chicago v. EDF* case have been edited to incorporate a summary of the “Coping with the RCRA Hazardous Waste System: A Few Practical Points for Fun and Profit” excerpt, which has been removed from this edition.
- The “Subtitle D, Coal Ash and the Regulation of ‘Nonhazardous’ Waste Disposal” section has been updated and consolidated.
- The Notes and Questions for the “RCRA’s ‘Imminent and Substantial Endangerment’ Provisions” have been incorporated into the main text of the section.
- Information about PFAS has been added to the “Liability Provisions of CERCLA” section.
- The excerpt from the *General Electric Co. v. Jackson* case has been removed.
- The notes following *New York v. Shore Realty Corp.* now more clearly address the Innocent Purchaser Defense, The Protection of Bona Fide Prospective Purchasers, and potential mitigation actions for Interim Owners.
- The Notes and Questions section following the first *Burlington Northern & Santa Fe Railway Co. v. United States* excerpt has been rewritten to reflect recent updates and developments in case law.
- The “Shrinking the Net of CERCLA Liability” section has been edited to provide greater clarity.
- In the “Problem Exercise: CERCLA Liability” a fourth question involving liability for PFAS contamination of drinking water has been added. It includes the problem of contamination from PFAS contained in aqueous film-forming foam (AFFF) widely used in firefighting.
- Two notes have been added to the Notes and Questions section following the second *Burlington Northern & Santa Fe Railway Co. v. United States* excerpt.
- The “Liability: Amount and Allocation” section has been renamed “The CERCLA Remediation Process and State Law Remedies” and has been updated to add an excerpt from the Supreme Court’s 2020 *Atlantic Richfield Company v. Christian* case.
- The section “Allocation of Liability” has been edited to be a subsection titled “Allocation of Liability and Contribution Actions.”
- The section entitled “Has Superfund Worked?” that preceded the “Dumpsite Regulation, the Dormant Commerce Clause, and Environmental Justice Concerns” section has been removed.

## Chapter 5- Air Pollution Control

- This chapter has been reorganized to make it easier to understand the complicated history and status of EPA’s regulation of greenhouse gas emissions.
- Immediately preceding the *Massachusetts v. EPA* case excerpt, a note has been added about Richard Lazarus’ book on the case, *The Rule of Five*.
- Two notes have been added to the Notes and Questions section following *Massachusetts v. EPA*. One discusses Justice Scalia’s dissent, and another discusses the subsequent history of GHG regulation at the EPA following the decision.
- The *Utility Air Regulatory Group v. EPA* decision and discussion of the Obama administration’s Clean Power Plan has been moved to a later part of Chapter 5.

- Edits have been made to the “Fuel Content” section to add information about recent developments, including a brief note about the *HollyFrontier Cheyenne Refining, LLC v. Renewable Fuels Ass’n* case.
- The Alternative Vehicles section has been shortened, and a brief note was added regarding the Trump administration’s attempted preemption of California’s standard, which is discussed at greater length later in the chapter.
- In the Notes following the Alternative Vehicles section, a brief addition was made to Note 7 discussing efforts to phase out gasoline-powered vehicles.
- A paragraph has been added to the end of the “Greenhouse Gases and Mobile Sources: California’s Special Role” section discussing the Trump administration’s efforts to roll back national fuel economy standards and the Biden Administration’s plans to strengthen them.
- The Problem Exercise entitled “A NAAQS for CO<sub>2</sub>?” has been updated to include the Trump administration’s denial of the petition to promulgate such a NAAQS.
- The *Whitman v. American Trucking Ass’n* case and the notes following the excerpt have been condensed and updated to discuss more recent case law and the implications of Justice Barrett joining the Supreme Court for the non-delegation doctrine.
- Following the *American Trucking* case and discussion, a new section has been added entitled “Revising the Ozone and Particulate NAAQS after American Trucking.”
- An additional new section entitled “CASAC and the Trump Administration’s ‘Secret Science’ Rule” has been added.
- The *Alaska Department of Environmental Conservation v. EPA* case has been removed.
- The *Environmental Defense v. Duke Energy Corp.* case has been condensed, along with the Notes and Questions section following the excerpt.
- An excerpt from the D.C. Circuit’s 2021 *American Lung Ass’n v. Environmental Protection Agency* decision striking down the Affordable Clean Energy (ACE) Rule has been added following a reworked section including an excerpt from *Utility Air Regulatory Group* decision.
- Notes have been added following the *EPA v. EME Homer City Generation, L.P.* case discussing updates to the agency’s regulatory emissions reduction progress since 2018 under the Trump and Biden administrations.

## Chapter 6– Water Pollution Control

- The excerpt from the *Rapanos v. United States* opinion has been slightly condensed, and notes following the excerpt have been added discussing the confusion spawned by the decision.
- The section on “The “Waters of the U.S. (WOTUS) or Clean Water Rule” has been updated to shorten the discussion on the WOTUS rule and explain the Trump administration’s replacement Navigable Waters Protection Rule (NWPR).
- A subsection entitled “Do Discharges That Pass Through Groundwater Require a Permit?” has been added to the “Regulation of Discharges from Point Sources” section. This new section includes an excerpt from the Supreme Court’s 2020 *County of Maui v. Hawaii Wildlife Fund* decision.
- The *South Florida Water Management District v. Miccosukee Tribe of Indians* case has been removed and replaced with a brief overview of the case and holding.
- A ninth note has been added to the Notes and Questions section following the *United States v. Plaza Health Laboratories, Inc.* case discussing subsequent developments in case law.
- The Water Pollution Control Pathfinder has been updated.
- A note discussing the *Sanitary Board of City of Charleston v. Wheeler* case was added to the Notes and Questions section following a section on Water Quality Standards.
- The excerpt from the *Arkansas v. Oklahoma* case has been shortened.
- A note on the EPA’s June 2020 Clean Water Act Section 401 Certification Rule has been added to the Notes and Questions section following the *PUD No.1 of Jefferson County v. Washington Department of Ecology* case.



- Updates concerning the Kensington Gold Mine have been added to the notes following the excerpt from *Coeur Alaska, Inc. v. Southeast Alaska Conservation Council* case.
- The section on “Nonpoint Source Controls, Watershed Protection, And Effluent Trading” includes updated information about the impact of climate change, nutrient pollution, and water quality trading programs.

## Chapter 7- Land Use and Regulatory Takings

- The introductory section of the chapter now discusses how racially discriminatory redlining helped spawn the creation of urban heat islands in minority neighborhoods.
- The Public Land and Natural Resources Law Pathfinder has been updated to include information about the Antiquities Act.
- The text following the pathfinder has also been updated to remove older information and add more recent information, including developments under the Trump and Biden Administrations.
- The “Federal Programs Affecting Private Land Use” section and notes also have been condensed for clarity.
- Information about the COVID-19 pandemic and its impact on the importance of outdoor spaces and parks has been added to Footnote 5 following the *Village of Euclid v. Ambler Realty Co.* case.
- The excerpt of “Liberty, Planned Growth: The Oregon Model” has been removed and replaced with a discussion incorporating some of the previous notes and questions following the excerpt.
- Information about the impact of Hurricane Irma has been added to a note following the *Lucas v. South Carolina Coastal Council* case excerpt.
- A note about Justice Thomas’ opinions on the regulatory takings doctrine has been added following the *Lingle v. Chevron U.S.A., Inc.* case.
- The excerpt from James G. Titus, “Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners” has been replaced with a brief overview and discussion.
- A header “Judicial Takings’ and Beach Replenishment: The *Stop the Beach* Decision” has been added before the excerpt from the Supreme Court’s “*Stop the Beach Renourishment, Inc. v. Florida Dep’t of Environmental Protection*” case.
- A section entitled *Knick v. Township of Scott* and the Future of Takings Jurisprudence has been added to the end of this chapter.

## Chapter 8- Environmental Impact Assessment

- Throughout the chapter information has been added about the Trump administration’s efforts to “streamline” the NEPA process.
- Information on a study of 13 years of NEPA decisions has been added to the section entitled “Procedure for Determining Whether or Not To Prepare An EIS.”
- In the same section, information about the Deepwater Horizon oil spill has been added, and the discussion of the 2011 FONSI guidance has been moved to follow the Deepwater Horizon discussion.
- A note has been added explaining how the CEQ’s 2020 revised regulations removed the previous interpretation of “significantly” that focused on an action’s context and intensity.
- In the notes for the same section, a note has been added discussing the Dakota Access Pipeline and remedies for NEPA violations.

- The “What “Effects” Must Be Considered” section has been updated to reflect the 2020 CEQ Regulations.
- A note was added to the Notes and Question section following the *Sierra Club v. Federal Energy Regulation Commission* case, which discusses FERC’s successful effort to supplement the EIS following the decision.
- Information about the Trump administration’s guidance on considering greenhouse gas emissions has been added to the problem exercise entitled “To What Extent Should a Project’s Impact On Greenhouse Gas Emissions And Climate Change Be Considered In An EIS?”
- Information about President Biden’s new chair of the CEQ has been added to a note in the Notes and Questions section following the *Vermont Yankee Nuclear Power Corp. v. NRDC* case excerpt.
- Information about the CEQ’s 2020 regulations increasing the use of tiering has been added to a note in the Notes and Questions section following the “ 1508.28 Tiering” section.
- The problem exercise “Should EISs for Nuclear Facilities Consider the Risks of Terrorist Attacks?” has been replaced with a problem exercise focusing on President Trump’s changes to NEPA regulations. The new problem exercise is entitled “Should Limits Be Imposed on the Length of Time for Preparing Environmental Impact Assessments?”
- A new section entitled “The Fixing America’s Surface Transportation (FAST) Act” has been added to the end of this chapter.

## Chapter 9– Preservation of Biodiversity

- The E.O. Wilson “Biophilia” excerpt has been condensed, and a note has been added to the Notes and Questions section following the excerpt discussing the World Wildlife Fund’s 2020 Living Planet Index.
- The *Gibbs v. Babbitt* case has been removed and replaced with a brief summary and discussion of the decision.
- A paragraph was added at the very end of the section entitled “The Listing Process,” that updates the numbers of ESA listed species as of May 2021.
- An excerpt from the Supreme Court’s 2018 decision in *Weyerhaeuser Co. v. U.S. Fish and Wildlife Service* was added to the “Critical Habitat Designation” section.
- The section “Climate Threatened Species” has been updated to “Threatened Species and Climate Change” and now includes information about the August 2019 revisions to ESA regulations.
- Information about the 2019 revisions to ESA regulations is also included in the next section discussing delisting.
- A note has been added to the Notes and Questions section following the *Thomas v. Peterson* case, which discusses a March 4, 2021 Supreme Court decision ruling that a draft biological opinion shared with EPA by the U.S. Fish and Wildlife Service is protected from disclosure under the federal Freedom of Information Act (FOIA) by the deliberative process privilege.
- Some of the notes following the *Thomas v. Peterson* case were separated and made into the text of a new section titled “Section 7 Consultations and Delegation of Clean Water Act Permitting Authority.” This section also includes a brief overview and discussion of the *National Ass’n of Homebuilders v. Defenders of Wildlife* case. The full excerpt of this opinion has been removed.
- Some of the notes following the *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon* case have been expanded in a new section entitled “Incidental Takes and the Migratory Bird Treaty Act.” This section includes information about the Trump Administration’s efforts to permit incidental takes of migratory birds.
- The N.Y. Times Excerpt entitled “Ignoring Pleas of Environmentalists, Kansas Man Digs Up Virgin Prairie” has been condensed.



- The Endangered Species Act Problem Exercise has been updated to include additional information about the Trump administration's efforts to delist the Greater Yellowstone grizzly from the endangered species list.
- The “The Future of Biodiversity Protection” section has been condensed.

## Chapter 10- Environmental Enforcement

- The new edition highlights former EPA enforcement chief's Cynthia Giles's hard-hitting critique of corporate compliance with the environmental laws.
- The “Monitoring and Detecting Violations” section has been reworked and has added information about the Acid Rain Program and about a June 21, 2019 explosion at the Philadelphia Energy Solutions refinery that was not detected by monitors. This is the refinery whose operations caused environmental justice issues introduced in Chapter 1.
- The notes following the excerpt from EPA's “Final Policy Statement on Incentives for Self-Policing of Violations” have been updated to discuss the eDisclosure Portal and the Biden Administration's reaffirmation of EPA's emphasis on voluntary self-disclosure.
- The excerpt from the *Sackett v. EPA* decision has been removed and replaced with a shorter overview and discussion of the case.
- The “Penalty Policies” section has several updates, including information on the Trump administration's lax enforcement of environmental laws, impact of the COVID-19 pandemic, the Trump administration effort to ban supplemental environmental projects in environmental enforcement settlements, which was quickly reversed by the Biden administration.
- Updates following the *Environment Texas Citizen Lobby, Inc. v. ExxonMobil Corp.* case have been added to Note 7 following the *Sierra Club v. Cedar Point Oil Co.* case. These reflect a trend to require individualized demonstrations of harm to establish standing in environmental cases.
- The excerpt from *Harmon Industries v. Browner* case has been removed and replaced with a condensed discussion of the case. A reference to Cynthia Giles' “Next Generation Compliance: Environmental Regulation for the Modern Era” has been added to this discussion, along with a Notes and Questions section.
- Information and statistics about criminal prosecutions have been updated and added to the “Criminal Enforcement” section, including additional information about the Volkswagen case.
- The *Norton v. Southern Utah Wilderness Alliance* case excerpt has been removed.
- Two notes have been added to the Notes and Questions section following the *Friends of the Earth v. Laidlaw Environmental Services* case. One discusses the increase in more complex citizen suits, and the other discusses additional standing implications for plaintiffs challenging emissions of greenhouse gases.
- The section entitled “The Eleventh Amendment and Citizen Suits against States” has been removed.

## Chapter 11- Protection of the Global Environment

- Updated numbers and statistics about the world's population, the climate crisis, and the COVID-19 pandemic have been added to the introductory material in the chapter.
- The Pathfinder has been updated.
- Information about the next global environmental summit currently being planned for 2022 is included at the end of the section titled “The 2012 Rio+20 Conference.”

- In the notes following the International Court of Justice Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia) case, an update concerning Japan's 2019 decision to withdraw from the International Whaling Commission has been added.
- Information about Congressional action to enable EPA to implement the Kigali agreement to phase out HFCs (the Consolidated Appropriations Act of 2021 and the American Innovation and Manufacturing (AIM) Act) has been added to the notes following the section on Ozone Depletion.
- Data about climate change and greenhouse gas emissions have been updated in the section "Global Climate Change."
- The section on the Kyoto Protocol to the Convention on Climate Change has been condensed.
- The excerpt from Dan Bodansky "The Durban Platform: Issues and Options for a 2015 Agreement" has been removed.
- In the notes following the Paris Agreement excerpt, updates on the Paris Agreement's implementation worldwide have been added.
- The section entitled "Regulation of GHG Emissions from Aviation" has been moved earlier in this chapter.
- The section entitled "The North American Free Trade Agreement (NAFTA) and the Environment" has been updated to reflect the changes caused by the US Mexico Canada Agreement. The section has been renamed "NAFTA, the US Mexico Canada Agreement, and the Environment."
- The *Beanal v. Freeport-McMoran, Inc.* case excerpt has been removed and replaced with a brief overview and consolidated discussion.
- The Seymour & Dubash "World Bank's Environmental Reform Agenda" excerpt has been removed and replaced with a consolidated discussion.
- An excerpt from the Supreme Court's 2019 decision in *Jam v. International Finance Corporation* has been added to this chapter, along with notes and discussion topics.

## Chapter 12- Environmental Progress and Prospects

- A brief note about the success of the phaseout of gasoline lead additives has been added to the introductory materials in this chapter.
- The Mary Graham excerpt "The Morning After Earth Day" has been removed.
- A Notes and Questions section has been added following the N.Y.T. excerpt titled "A New Way of Living with Nature."
- The "Environmental Prospects" section has moved later into the chapter and condensed for clarity.
- The Notes and Questions section following the excerpt from Esty & Chertow, *A Vision for the Future*, has been updated and condensed.
- The Percival Transnational Environmental Law excerpt from *Nature's Law* has been removed.
- A new section entitled "Private Environmental Governance" has been added. The section discusses modern corporate environmentalism. This section also includes information on the corporate response to the Trump Administration's efforts to roll back environmental regulations and the August 2019 Business Roundtable statement discussing corporate obligations to protect the environment.
- New headers have been added to these topics concerning corporate environmentalism, including "Disclosure of Environmental Liabilities and Climate Risks"; "Environmental Certification Programs"; and "Environmentally Responsible Financing." The 2021 election of three environmental activists to the board of ExxonMobil, over the opposition of management, is mentioned.

## Appendix A- Glossary

- The definition of Clean Power Plan has been changed to reflect that the regulations were issued during the Obama Administration.
- The following terms have been added:
  - Fenceline Community
  - Forum non conveniens
  - High priority substances
  - Pandemic
  - Perfluoroalkyl and polyfluoroalkyl substances (PFAS)
  - Social cost of carbon
  - Zoonosis

## Appendix B- List of Acronyms

### The following Acronyms have been added:

- |            |         |          |
|------------|---------|----------|
| ◦ ACE      | ◦ FAST  | ◦ PFOA   |
| ◦ AFFF     | ◦ FSIA  | ◦ PFOS   |
| ◦ ASLB     | ◦ GRI   | ◦ RMRR   |
| ◦ ATS      | ◦ ICAO  | ◦ SAFE   |
| ◦ CCR      | ◦ ICJ   | ◦ SCC    |
| ◦ CDP      | ◦ IFC   | ◦ SDG    |
| ◦ CITES    | ◦ IOAI  | ◦ SEP    |
| ◦ CORSIA   | ◦ IWC   | ◦ TRPA   |
| ◦ COVID-19 | ◦ NAACP | ◦ UNCED  |
| ◦ CPP      | ◦ NEJAC | ◦ UNCLOS |
| ◦ DAPL     | ◦ NWPR  | ◦ USMCA  |
| ◦ DPCP     | ◦ OPIC  | ◦ WARS   |
| ◦ ESG      | ◦ PFAS  | ◦ WSSD   |
|            |         | ◦ WWF    |

### The following Acronyms have been removed:

- LOEL
- MEP (changed to MEE)
- MMT
- NOAEL