
Summary of Contents

About the Editor	xix
About the Contributors	xxi
Preface	xxix
Acknowledgments	xxxii
<i>Chapter One</i>	
Overview of the Clean Water Act	1
<i>Theodore L. Garrett</i>	
<i>Chapter Two</i>	
Scope of “The Waters of the United States” Protected by the Clean Water Act	13
<i>Donna M. Downing</i>	
<i>Chapter Three</i>	
Water Pollution Control under the National Pollutant Discharge Elimination System	35
<i>Karen M. McGaffey, Kelly F. Moser, Aubri N. Margason, and Julie A. Wilson-McNerney</i>	
<i>Chapter Four</i>	
NPDES Permit Application and Issuance Procedures	67
<i>Randolph L. Hill</i>	
<i>Chapter Five</i>	
Publicly Owned Treatment Works	95
<i>Alexandra Dapolito Dunn, Nathan Gardner-Andrews, and Amanda Waters</i>	
<i>Chapter Six</i>	
Pretreatment and Indirect Dischargers	117
<i>Ankur Tohan</i>	
<i>Chapter Seven</i>	
Regulation of Wetlands: Section 404	133
<i>Hugh Barroll</i>	

<i>Chapter Eight</i>	
Oil and Hazardous Substances Spills: Section 311	161
<i>David G. Dickman</i>	
<i>Chapter Nine</i>	
Wet Weather Regulations: Control of Stormwater and Discharges from Concentrated Animal Feeding Operations and Other Facilities	205
<i>Randolph L. Hill and Sylvia Horwitz</i>	
<i>Chapter Ten</i>	
Nonpoint Source Pollution Control	233
<i>Edward B. Witte</i>	
<i>Chapter Eleven</i>	
Total Maximum Daily Loads: Section 303(d)	251
<i>Steven T. Miano, Kelly A. Gable, and Jessica O’Neill</i>	
<i>Chapter Twelve</i>	
Enforcement: Sections 309 and 505	277
<i>Chapter Thirteen</i>	
Judicial Review: Section 509	343
<i>Karen M. McGaffey, Kathryn C. Rose, and Margaret C. Hupp</i>	
<i>Chapter Fourteen</i>	
Federal Facilities	351
<i>Jeremy N. Jungreis, Jeanette M. Jungreis, and S. Wayne Rosenbaum</i>	
Table of Cases	373
Index	395

Contents

About the Editor	xix
About the Contributors	xxi
Preface	xxix
Acknowledgments	xxxii
 <i>Chapter One</i>	
Overview of the Clean Water Act	1
<i>Theodore L. Garrett</i>	
Historical Background	1
Point Source and Dredge/Fill Permits	3
Technology-Based and Water Quality–Based Effluent Limitations	5
Spill of Hazardous Substances, Stormwater, and Nonpoint Sources	7
Enforcement and Judicial Review	8
What Lies Ahead	10
 <i>Chapter Two</i>	
Scope of “The Waters of the United States” Protected by the Clean Water Act	13
<i>Donna M. Downing</i>	
Introduction	13
Congressional and Regulatory Interpretations	14
Judicial Interpretations	17
<i>Riverside</i> and Adjacent Wetlands	18
<i>SWANCC</i> and Isolated Waters	19
<i>Rapanos</i> and Non-navigable Tributaries and Their Adjacent Wetlands	20
Post- <i>Rapanos</i> Judicial Interpretations	22
EPA and Corps Guidance	25
Agency Practice	26
Clean Water Rule	28
Recent Administration Efforts to Revise the Definition of “Waters of the United States”	32
Potential Future Directions	34

Chapter Three

Water Pollution Control under the National Pollutant Discharge Elimination System	35
<i>Karen M. McGaffey, Kelly F. Moser, Aubri N. Margason, and Julie A. Wilson-McNerney</i>	
Applicability and Scope	35
Definitions	36
Discharge	36
Addition	36
Pollutant	37
Point Source	39
Navigable Waters	40
Exclusions from the NPDES Program	40
Discharges to Groundwater	41
Conditions Applicable to All NPDES Permits	42
Technology-Based Effluent Limitations	44
Levels of Control	45
Best Practicable Control Technology (BPT) Currently Available	46
Best Conventional Pollutant Control Technology (BCT)	47
Best Available Technology (BAT) Economically Achievable	47
New Source Performance Standards (NSPS)	48
Pretreatment Standards for Existing and New Sources (PSES and PSNS)	49
Developing Technology-Based Limits	49
Variances	50
Fundamentally Different Factors Variance	50
BAT Variances	50
Secondary Treatment Variances	51
Water Quality-Based Effluent Limitations	51
Elements of a Water Quality Standard	52
Designated Uses	52
Water Quality Criteria	53
Narrative Criteria	57
Antidegradation	57
Standards Review and Approval Process	58
Supplemental Water Quality-Based Effluent Limitations: Section 302	59
Total Maximum Daily Loads: Section 303(d)	60
Individual Control Strategies: Section 304(l)	60
State Responsibilities	60
Individual Control Strategies	62
EPA Responsibilities	63

Implementation	63
Site-Specific Criteria and Variances	64
Low Flows	64
Mixing Zones	65
Compliance Schedules	65
<i>Chapter Four</i>	
NPDES Permit Application and Issuance Procedures	67
<i>Randolph L. Hill</i>	
Applicability and Scope	67
Types of NPDES Permits	68
Individual Permits	68
General Permits	68
Application Requirements	70
Who Must Apply?	70
Timing of Application	70
Content of Application	70
Signature Requirements	72
Permit Issuance Process	72
Review for Completeness	72
Effective Date of Application	72
Tentative Permit Decision, Issuance of a Draft Permit, and Public Notice	72
Public Comment and Hearing	73
Final Permit Decision	74
State Certification of EPA-Issued Permits and EPA Review of State-Issued Permits	74
State Certification	74
EPA Review	75
Statutory Authority	75
Regulatory Standard/MOA	76
Veto of State-Issued Permits	77
Basis for Veto	77
Procedures for Veto	78
Effect of Permit Issuance: Permit Shield	79
Permit Term, Expiration, and APA Extension	80
Special NPDES Program Requirements for New Sources	81
Permit Appeals	82
EAB Hearing Process	83
Procedure for Requesting and Obtaining EAB Review	83
Judicial Review of Final Agency Permit Action	84
Effect of Appeal on the Issued Permit	85
Appeal of General Permits	85

Permit Modification, Revocation, Termination, and Transfer	85
Permit Modification or Revocation and Reissuance	86
Permit Modification	86
Minor Modifications	86
Major Modifications	87
Revocation and Reissuance	88
Permit Termination	89
Permit Transfers	89
Procedures for Modification, Revocation and Reissuance, or Termination of Permits	89
Anti-backsliding Prohibitions	91
<i>Chapter Five</i>	
Publicly Owned Treatment Works	95
<i>Alexandra Dapolito Dunn, Nathan Gardner-Andrews, and Amanda Waters</i>	
Applicability and Scope	95
Effluent Limitations Applicable to POTWs	95
Technology-Based Limitations	95
Water Quality–Based Limitations	97
POTW NPDES Permit Requirements	97
POTW Pretreatment Programs	99
Applicability	100
Pretreatment Standards	100
Categorical Standards	100
Prohibited Discharge Standards	101
Substantive Requirements	101
Streamlining Rule	102
Submission and Approval Procedures	102
Modifications and Current Trends	103
Sewage Sludge Use and Disposal	104
Round One Sludge Regulations	105
Regulations for Sewage Sludge Incineration	107
Round Two Sludge Regulations	108
Sewer Overflows	109
Combined Sewer Overflows	110
Sanitary Sewer Overflows	112
Wet Weather Enforcement	114
Integrated Planning	114

<i>Chapter Six</i>	
Pretreatment and Indirect Dischargers	117
<i>Ankur Tohan</i>	
Overview	117
Objectives	117
Definitions	117
Applicability	118
General Pretreatment Requirements	119
Categorical Pretreatment Standards	121
Applicability and Basis	121
Combined Wastestream Formula	124
Deadlines	124
Innovative Technology Deadline Extensions	124
Modifications and Variances of Categorical Pretreatment Standards	125
Removal Credits	125
Fundamentally Different Factors Variances	126
Net/Gross Calculation	126
Reporting, Monitoring, and Record Maintenance	127
Industrial Users Subject to Categorical Standards	127
Baseline Monitoring Reports	127
Compliance Reports	127
Periodic Reports	127
Industrial Users Not Subject to Categorical Standards	129
Reporting Obligations Applicable to All Industrial Users	129
Slug Load Notification	129
Notification of Hazardous Waste Discharges	129
Notification of Changed Discharge	130
Records Maintenance	130
Enforcement	130
 <i>Chapter Seven</i>	
Regulation of Wetlands: Section 404	133
<i>Hugh Barroll</i>	
Introduction	133
Regulated Activities	134
Geographical Scope of Jurisdiction	136
“Waters of the United States”	136
Wetlands	141

Permit Program	142
Administration	142
Permit Types	142
Nationwide Permits	142
Regional Permits and Letters of Permission	143
Programmatic Permits	144
Individual Permits	144
Emergency Procedures	144
After-the-Fact Permits	144
Individual Permit Process	145
Permitting Process	145
Permitting Decision Considerations	148
Public Interest Review	148
EPA's Section 404(b)(1) Guidelines	148
Mitigating for Impacts to Protected Waters	150
Enforcement: Potential Liabilities for Violating Section 404	152
Agency Roles and Administrative Enforcement	152
Judicial Enforcement	153
Affirmative Defenses	153
Statute of Limitations	153
Section 404(f) Exemptions	153
Nationwide Permits	154
Remedies	154
Injunctive Relief	154
Civil Penalties	155
Pre-enforcement Review	155
Other Issues in Wetlands Regulation	156
State Wetland Programs	156
Taking Claims	156
Intersection of CWA Sections 402 and 404	158
<i>Chapter Eight</i>	
Oil and Hazardous Substances Spills: Section 311	161
<i>David G. Dickman</i>	
Introduction and Scope	161
Historical Background	161
Oil Pollution Act of 1990	163
Definitions in CWA Section 311	164
General Discharge Prohibition in CWA Section 311	164
Exemptions from the General Discharge Prohibition	165
Spill Notification Requirement	167
Spill Prevention	167
SPCC Plans: Non-Transportation-Related Facilities	168
Marine Facilities and Vessels	171

Removal and Response Authority	172
Authority to Act	172
Substantial Threats to Public Health or Welfare	173
Federal Response Units	173
Responder Immunity	174
Response Planning	174
Federal Response Contingency Plans	174
Facility and Vessel Response Plans	176
Non-Transportation-Related Facility Response Plans	177
Marine Transportation-Related Facility Response Plans	178
Offshore Facility Response Plans	179
Vessel Response Plans	180
Response Planning Requirements for Edible Oils	181
Response Planning Requirements for Non-Tank Vessels	181
Liability for Response Costs and Damages	182
Liability for Oil Discharges under the OPA	182
OPA Limits of Liability for Response Costs and Damages	186
Defenses and Exclusions to Liability under the OPA	188
Financial Responsibility Requirements under the OPA	190
Oil Spill Liability Trust Fund (OSLTF)	192
Gulf Coast Restoration Trust Fund	193
Enforcement	195
Criminal Sanctions	195
Administrative Civil Penalties	196
Judicial Civil Penalties	197
Factors to Be Considered in Determining Civil Penalty Amounts	199
Withholding of Port Clearance for Vessels Liable for Civil Penalties	200
Civil Enforcement Orders	201
Administrative Enforcement Provisions	202
The Section 311 Savings Clause	202
<i>Chapter Nine</i>	
Wet Weather Regulations: Control of Stormwater and Discharges from Concentrated Animal Feeding Operations and Other Facilities	205
<i>Randolph L. Hill and Sylvia Horwitz</i>	
Stormwater	205
Phase I Stormwater Discharges	207
Discharges Associated with Industrial Activity	207
Industrial Stormwater Discharges to Separate Storm Sewer Systems	209
Exclusions	209
Conditional Exclusion for No Exposure of Industrial Activities and Materials in Stormwater	210

Types of Permit Applications for Discharges	
Associated with Industrial Activity	211
Discharges from Large and Medium Municipal Separate	
Storm Sewer Systems	214
Application Requirements for Large and Medium Municipal	
Separate Storm Sewer Systems	215
NPDES Permit Conditions for Municipal Separate	
Storm Sewer Systems	215
Compliance Deadlines	217
Phase II Stormwater Discharges	218
Discharges from Small Construction Activity	218
Discharges from Small Municipal Separate Storm Sewer Systems	219
Phase II Permit Application Deadlines	221
Concentrated Animal Feeding Operations	221
Definition of CAFO	222
Which Facilities Qualify as AFOs?	222
Which AFOs Are CAFOs by Definition?	224
Which AFOs May Be Designated CAFOs?	225
CWA Requirements Applicable to CAFOs	226
Prohibition on Unpermitted Discharges	226
Which CAFOs Require NPDES Permits?	227
Effluent Limitations Applicable to CAFOs	227
Other Wet Weather Discharges	230
Silviculture	230
Aquatic Animal Production or Aquaculture	231
Aquatic Animal Production Facilities	231
Aquaculture Projects	232
Combined Sewer Overflows and Sanitary Sewer Overflows	232
<i>Chapter Ten</i>	
Nonpoint Source Pollution Control	233
<i>Edward B. Witte</i>	
Introduction	233
Definition	235
Original Control Provisions in the Clean Water Act of 1972	236
CWA Section 208	236
CWA Section 303(e)	236
Water Quality Management Plans under Sections 208 and 303(e)	237
Enactment of Section 319 in the Water Quality Act of 1987	237
State Assessment Reports under Section 319(a)	237
State Management Programs under Section 319(b)	237
Grants for State Management Programs under Section 319(h)	238

Selected Milestones in the Section 319 Program	238
1987: EPA Issues Nonpoint Source Guidance	238
1991: Creation of Section 319 National Monitoring Program	239
1992: Final Report to Congress on Section 319 Activities	239
1996: New Focus for Section 319 Program	240
1998: Clean Water Action Plan	240
2003–2009: Development of Watershed-Based Plans and TMDLs	241
2012 and 2013: Revised Focus for Section 319 Program	243
Related Programs for the Control of Nonpoint Source Pollution	244
Coastal Zone Act Reauthorization Amendments of 1990	244
Unified Federal Policy for Watershed Management on Federal Lands	245
Enforceable State Mechanisms	246
Water Quality Trading Programs	247
The Future of Nonpoint Source Pollution Control	249
<i>Chapter Eleven</i>	
Total Maximum Daily Loads: Section 303(d)	251
<i>Steven T. Miano, Kelly A. Gable, and Jessica O’Neill</i>	
Introduction	251
TMDL Basics	252
Components of a TMDL	252
The TMDL Process	253
Determining Whether the Water Body Needs a TMDL	253
How to Establish a TMDL	254
Gather Data on Sources Contributing to Impairment	255
Conduct Modeling, Studies, and Other Technical Work	255
Run Scenarios and Set Overall Loading Capacity	256
Set Margins of Safety, Consider Phased TMDL	257
Set Allocations	257
Draft TMDL Document	258
Public Notice and Comment Draft TMDL	259
Finalize TMDL After Considering Comments	259
Submit Final TMDL to EPA	259
The Timing of Establishing TMDLs	260
Implementation of TMDLs	260
Point Sources	260
New or Increased Discharges	261
Permitted Stormwater Discharges	262
Section 401 Certifications	263
Watershed Permits	263
Nonpoint Sources	264
Trading as a Method of Implementing TMDLs	264
Adaptive and Staged Implementation	266

TMDL Litigation	266
Before the TMDL: Initial Litigation, Constructive Submission, and Challenges to 303(d) Lists	267
Challenges to Establishment of TMDLs	270
Specific Pollutants Subject to TMDLs	271
Nutrients	272
Sources of Heat	272
Trash	273
Sediment	273
Multistate Issues	274
TMDLs and the Endangered Species Act	275
<i>Chapter Twelve</i>	
Enforcement: Sections 309 and 505	277
Civil Judicial Enforcement	277
<i>Beth S. Ginsberg, Jason T. Morgan, and James T. Graves</i>	
Statutory Authority	277
Enforcement Trends	278
EPA's Enforcement Jurisdiction	280
Venues and Statutes of Limitations	280
Standards of Liability	282
Elements of Proof	282
Discharge of a Pollutant	283
Navigable Waters	284
Point Source	284
Unitary Waters Case	284
Trial Considerations	285
The Right to a Jury	285
DMRs as Evidence of Liability	285
Prevailing Party Considerations	285
Defenses	286
Regulatory Defenses	286
Additional Affirmative Defenses	286
The Permit Shield	287
Res Judicata or Claim Preclusion	288
Estoppel	288
Mootness	288
Laches	289
Impossibility	289
Bankruptcy	289
Degree of Harm and Good Faith	290

Remedies	290
Civil Penalties	290
Injunctions	292
Consent Decrees	292
Civil Administrative Enforcement	292
<i>Mark A. Ryan and Gary A. Jonesi</i>	
Administrative Compliance Orders	293
Administrative Penalties	294
Class I Penalty Actions	295
Class II Penalty Actions	295
Factors Affecting Amount of Penalties	296
Subpoenas	297
Rights of Interested Persons	298
Collection of Unpaid Administrative Penalties	298
Appeals	299
Role of the EAB	299
EAB Workload	299
Appeal as of Right	300
Discretionary Appeal: Interlocutory Review	300
Sua Sponte Review	300
Oral Argument	301
Standard of Review before the EAB	301
Deference Generally	302
Deference on Evidentiary Issues	302
Deference on Penalties	302
Deference to Other Adjudicatory Bodies	303
Reconsideration	303
Remands from the EAB	304
Binding Impact of EAB Decisions	304
Judicial Review	304
Sources of Information about EAB Practice	305
Preemption	305
Information Requests	306
Criminal Enforcement	307
<i>James D. Oesterle</i>	
Introduction and Overview	307
Criminal Enforcement Resources	308
Commonly Charged CWA Offenses	309
The Mental State Requirement	309
Knowing Violations	310
Willful Blindness Doctrine	312
Responsible Corporate Officer	312
Negligent Violations	314

Common Criminal Offenses	315
Direct Discharge	315
Discharges to Sewer Systems/Pretreatment Violations	315
Falsification and Tampering	316
Knowing Endangerment	317
Oil or Hazardous Substances Violations	319
Prohibited Discharges of Oil or Hazardous Substances:	
33 U.S.C. § 1321(b)(3)	319
Failure to Report Spills: 33 U.S.C. § 1321(b)(5)	320
Related Water Pollution Statutes	321
Rivers and Harbors Act of 1899	321
Marine Protection, Research, and Sanctuaries Act (Ocean Dumping Act)	322
Act to Prevent Pollution from Ships	322
Generally Applicable Criminal Statutes	322
Exercise of Prosecutorial Discretion	323
Citizen Suits	324
<i>Melanie Shepherdson</i>	
Statutory Authority	324
Legislative Intent and Authority	324
Types of CWA Citizen Suits	325
Section 505(a): Failure to Comply with Act	326
Section 505(b): Government Failure to Comply with Mandatory Duty	327
Statutory Requirements for Citizen Suits	329
Notice	329
Preexisting Prosecutions	330
Venue	332
Standing	332
Defenses	336
Ongoing Violation and Mootness	336
Statute of Limitations	337
Intervention	338
Remedies	338
Civil Penalties	338
Department of Justice Comments on Consent Decrees	339
Attorney’s Fees and Costs	339
 <i>Chapter Thirteen</i>	
Judicial Review: Section 509	343
<i>Karen M. McGaffey, Kathryn C. Rose, and Margaret C. Hupp</i>	
Jurisdiction	343
Federal Court of Appeals	343
District Court Jurisdiction	348

Justiciability: Ripeness and Exhaustion of Administrative Remedies	349
Ripeness	349
Exhaustion of Remedies	350
<i>Chapter Fourteen</i>	
Federal Facilities	351
<i>Jeremy N. Jungreis, Jeanette M. Jungreis, and S. Wayne Rosenbaum</i>	
Introduction	351
What Are Federal Facilities, and Who Has Regulatory	
Authority on Federal Lands?	352
Application of the Clean Water Act on Federal Lands	354
Sovereign Immunity of Federal Facilities—the Control and Abatement	
of Water Pollution via Section 313 of the Clean Water Act	355
The Test	357
Results in Discharge or Runoff	357
Requirement	357
Control and Abatement of Water Pollution	358
Same Manner as Any Nongovernmental Entity	358
Stormwater Regulation at Federal Facilities	359
Municipal MS4 Regulation	359
Federal Facility MS4s Generally Operate under Phase II MS4 Permits	360
Determining What Constitutes the MS4 for a Federal Facility	360
Construction	361
Industrial	361
Fees and Taxes Assessed on Federal Facilities for CWA Compliance	362
General Framework and Requirements of Federal Fiscal Law	362
The Cardin Amendment: Game Changer or Isolated Response to	
Federal Agency Recalcitrance?	363
CWA Enforcement against Federal Facilities	364
EPA and State Enforcement	364
Citizen Enforcement of CWA Violations on Federal Facilities	366
Enforcement of Water Quality Standards against Federal Agencies	
under Federal Administrative Procedures Act (APA)	367
Other Legal Authority over Water Quality on Federal Lands	369
Legislative Action and Implementation	369
Executive Action	369
Conclusion	371
Table of Cases	373
Index	395