

Contents

Preface.....	ix
About The Handbook of Natural Resources	xi
Acknowledgments	xiii
Aims and Scope	xv
Editor	xvii
Contributors	xix

SECTION I Riparian Zone and Management

1 Floodplain Management	3
<i>French Wetmore</i>	
2 Floods: Riverine	11
<i>William Saunders, Alison MacNeil, and Edward Capone</i>	
3 Marshes: Salt and Brackish	19
<i>Sally D. Hacker</i>	
4 Peatlands.....	27
<i>Dale H. Vitt and Paul Short</i>	
5 Pollution: Nonpoint Source	37
<i>Ravendra Naidu, Mallavarapu Megharaj, Peter Dillon, Rai Kookana, Ray Correll, and W. W. Wenzel</i>	
6 Riparian Wetlands: Mapping.....	41
<i>Kristen C. Hychka</i>	
7 Riparian Zones: Groundwater Nitrate (NO_3^-) Cycling.....	47
<i>D. Q. Kellogg</i>	
8 River Delta Processes and Shapes.....	55
<i>Douglas A. Edmonds and Rebecca L. Caldwell</i>	
9 Streams: Perennial and Seasonal	67
<i>Daniel von Schiller, Vicenç Acuña, and Sergi Sabater</i>	

10	Vernal Pool	75
	<i>Peter W. C. Paton</i>	
11	GIS Analysis of Groundwater Salinity	81
	<i>Yuming Wen</i>	
12	Basic Evaluation Units and Physical Structural Integrality in Riparian Zone Evaluation	89
	<i>Bolin Fu, Yeqiao Wang, and Ying Li</i>	
13	Riparian Zones Evaluation: Remote Sensing	101
	<i>Bolin Fu, Yeqiao Wang, and Ying Li</i>	

SECTION II Wetland Ecosystem

14	Cooling Effects of Urban and Peri-Urban Wetlands: Remote Sensing	115
	<i>Zhenshan Xue, Zhongsheng Zhang, Caifeng Cheng, and Tingting Zhang</i>	
15	Ecosystem Service Decline in Response to Wetland Loss	125
	<i>Fengqin Yan and Shuwen Zhang</i>	
16	Wetlands	131
	<i>Ralph W. Tiner</i>	
17	Wetlands: Biodiversity	137
	<i>Jean-Claude Lefeuvre and Virginie Bouchard</i>	
18	Wetlands: Classification	143
	<i>Arnold G. van der Valk</i>	
19	Wetlands: Ecosystems	153
	<i>Sherri DeFauw</i>	
20	Wetlands: Freshwater	159
	<i>Brij Gopal</i>	
21	Wetlands: Tidal	165
	<i>William H. Conner, Jamie A. Duberstein, and Andrew H. Baldwin</i>	

SECTION III Wetland Assessment and Monitoring

22	Wetlands: Economic Value	187
	<i>Gayatri Acharya</i>	
23	Wetlands: Indices of Biotic Integrity	193
	<i>Donald G. Uzarski, Neil T. Schock, Ryan L. Wheeler, Jacob M. Dybiec, Anna M. Harrison, and Alexandra C. Mattingly</i>	
24	Wetlands: Remote Sensing	201
	<i>Niti B. Mishra</i>	
25	Assessment of Health Status of Lake Wetland by Vegetation-Based Index of Biotic Integrity (V-IBI)	213
	<i>Wenjing Yang</i>	

26	Remote Sensing for Wetland Indices.....	225
	<i>Jason Yang</i>	
27	Wetland Mapping: Poyang Lake, Remote Sensing.....	233
	<i>Jian Xu and Dan Gao</i>	
28	Wetland Conservation Efforts and Policy Impacts in China	239
	<i>Zongming Wang, Dehua Mao, and Mingming Jia</i>	
29	Water Dynamics of Floodpath Lakes and Wetlands: Remote Sensing.....	247
	<i>Yeqiao Wang</i>	
30	Water-Level Variation of Poyang Lake: Remote Sensing.....	255
	<i>Shuhua Qi and Yeqiao Wang</i>	
	Index	269