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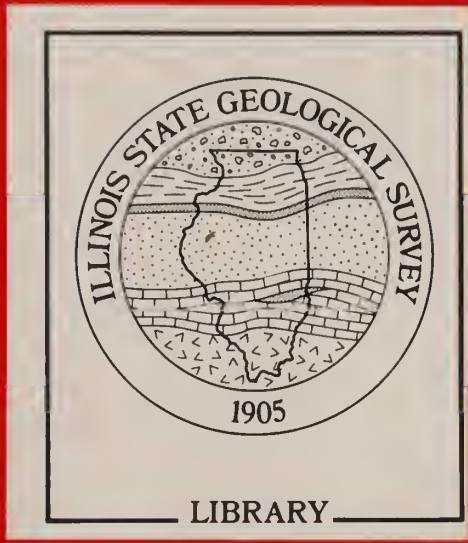
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**LAKE MICHIGAN BIBLIOGRAPHY: GEOLOGICAL AND  
PHYSICAL PROCESSES UPDATE**

By Beth McArdle Morgan and Nancy Peterson Holm

Lake Michigan Coast and Basin Studies  
Illinois State Geological Survey  
Champaign, Illinois

Report prepared under U.S. Geological Survey/Illinois State Geological Survey Cooperative Agreement A0563, December, 1989



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TABLE OF CONTENTS

INTRODUCTION	iii
GUIDE TO REFERENCES	iv
REFERENCES	1
AUTHOR INDEX	49
SUBJECT INDEX	71
AREA INDEX	97

## INTRODUCTION

This bibliography is an update to the Lake Michigan Bibliography: 1860-1988, Geological and Physical Processes. There are 474 entries. The references are arranged alphabetically by the last name of the principal author. Indexes are given for author, subject, and area of the lake studied. For more discussion see Guide to the Indexes.

The new entries include references to new literature published during 1988 and 1989, as well as references to recently obtained literature previous to 1988 and references to harbors and zooplankton of interest to the U.S. Geological Survey. The latter were not included in the main bibliography because of limitations in the software used to produce the indexes.

References for this bibliography and the main Lake Michigan bibliography were compiled from searches of on-line computer databases (Biological Abstracts, Chemical Abstracts, Dissertation Abstracts, Enviroline, GEOREF, NTIS, and Selected Water Resources Abstracts), from Sea Grant publication listings, from Department of Natural Resources publication listings for bordering states, from International Joint Commission bibliographies, from NOAA publication listings, from searches of journals not covered adequately by other searches (e.g., J. Physical Oceanography), and from additional references in many other publications.

The references were entered into a computerized database using InMagic as a management program for an IBM PS2, Model 30 286, (personal computer) allowing

searching and sorting by author, title, date, keywords, etc. In order to identify keywords more specifically than from the title alone, all possible copies or abstracts of articles were acquired. Where possible, keywords were obtained by examining the actual article. Otherwise key words were entered from the title, with additional important keywords added to maintain uniformity for indexing. All articles were classified by one or more main subjects (biology, chemistry, geology, meteorology, physical limnology, hydrology, management, economics or recreation) and then further subclassified.

The subjects covered in this bibliography are those of interest to the U.S. Geological Survey (as indicated by U.S.G.S. personnel). This special update compilation of references for geological and physical processes was done under U.S.G.S. contract.

The Lake Michigan Coast and Basin Studies Section of the Illinois State Geological Survey would appreciate being notified of any additions or corrections.

#### GUIDE TO THE INDEXES

Indexes are given for author, subject, and area of the lake studied. The author index lists all authors, principal as well as joint.



Due to size limitations, not all subjects listed in computer files are included in the index. If a subject is not listed, there may be no listings under that subject or it may be classified under a more inclusive keyword. References listed under a specific keyword are not inclusive so that additional subjects should be examined. Metals include major metals (e.g., Ca) and trace metals. Specific metals are also indexed. The term hydrology includes groundwater and water budget articles. References on chlorinated hydrocarbons are listed under organics. Meteorological studies are indexed under organics as well as under more specific terms (i.e., storms, precipitation, lake effect, etc.) See meteorology in the subject index for a listing of additional specific terms.

History, review, and summary are used as keywords to identify articles that may give backgrounds or summations on specific topics. Where possible, subjects listing many references are organized into appropriate subdivisions. The term general may be used as a subdivision where articles do not fit designated subdivisions. Such articles remain indexed under the main subjects.

In the subject index, where two words are joined by an underscore, the symbol \_ indicates that both words are found among keywords for an article but not necessarily next to each other. The two words are associated in the index in order to specifically define the subject and are used as subheadings. For example, lake levels\_history lists the numbers for references on history of lake levels whereas lake levels\_management lists the numbers for references on management of lake levels.



If a specific subject lists only a few references, more information can be found by looking under a more inclusive subject. To direct the user to other appropriate headings, certain subjects are cross-referenced with the symbol SA: ("see also.") SA: refers to other access subjects and is used in three ways:

1. SA can mean that additional references can be found under another word not necessarily listed with the original word, e.g., sediments\_transport (SA: littoral drift).
2. It can mean that the subject is also included under a broader category, e.g., bulkheads (SA: coastal structures), where additional references are found in addition to the present ones. Some articles did not give specifics and SA shows that the index word is not inclusive.
3. SA is also used to indicate a more specific topic for the word such as diversion (SA: history\_diversion) if a further breakdown of the subject is sought.

In addition to SA:, the symbol S:, (meaning "See") refers to a different word in the index which is related e.g., river (S: tributaries).

The area index lists articles by area, if known more specifically than just Lake Michigan. While all articles are on Lake Michigan, articles may be on the Great Lakes in general or discuss the other Great Lakes. Only other Great

Lakes and large rivers are included in the area index along with cities, states, bays, harbors, tributaries, and power plants. Because not all articles could be examined to find the specific area studied, any particular area listed in the index does not necessarily cover all articles on that area.

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Pages 1-47

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INDEXES  
Pages 49-108

AUTHOR INDEX

Adams, C. E., Jr. ....	145
Agena, W. F. ....	236
Alberts, J. J. ....	1, 2
Albrecht, K. A. ....	3
Allee, D. J. ....	96
Allen, J. ....	4
Amacher, G. S. ....	5
Anders, W. A. ....	449
Anderson, D. V. ....	6
Anderson, T. ....	450
Anderson, V. L. ....	337
Andren, A. W. ....	362
Angel, J. ....	168
Anglin, C. D. ....	7, 455
Anonymous ....	8 - 11
Arihood, L. D. ....	454
Armstrong, D. E. ....	395
Assel, R. A. ....	12
Association of State Flood Plain Managers ....	13
Auer, M. T. ....	100
Averett, D. E. ....	31
Ayers, J. C. ....	14
Baier, D. ....	227
Baird, W. F. (SA: W.F. Baird & Associates, Ltd.) ....	7, 455

Baker, D. B. ....	15
Bales, D. ....	402
Banaszak, K. J. ....	16, 454
Barres, J. ....	340
Barrows, H. K. ....	17
Baumann, W. ....	227
Bayer, A. ....	140
Beeton, A. M. ....	341, 445
Behrendt, J. C. ....	18, 288
Bell, G. L. ....	98
Bell, J. M. ....	337
Bellet, D. ....	19
Bennett, J. R. ....	20
Berg, D. W. ....	104, 105
Berg, N. A. ....	191
Besser, J. M. ....	108
Bhowmik, N. G. ....	21
Bierman, V. J., Jr. ....	22
Bixby, W. H. ....	23
Blumer, S. P. ....	24
Bonney, T. G. ....	25
Borgman, R. ....	148
Born, S. M. ....	26
Bottin, R. R., Jr. ....	27, 28
Botts, L. ....	331, 404
Boulton, J. G. ....	29
Boyer, L. F. ....	30



Brannon, J. M. ....	31	
Brater, E. F. ....	32	
Brazee, R. J. ....	5	
Brinkmann, W. A. R. ....	33	
Brooks, A. D. ....	195	
Brose, W. M. ....	455	
Brown, P. N. ....	93	
Bruce, W. G. ....	34	
Brunn, P. ....	35	
Bryson, R. A. ....	36	
Buckler, W. R. ....	37	
Bulkley, J. W. ....	5	
Burton, T. M. ....	38	
Caldwell, L. K. ....	39,	40
Campbell, C. D. ....	74	
Canadian Climate Centre ....	441	
Canale, R. P. ....	41	
Cannon, W. F. ....	288	
Carey, E. P. ....	42	
Carrick, H. J. ....	43	
Cartnick, E. C. ....	44	
Cavadias, G. S. ....	309	
Center for the Great Lakes ....	45,	46
Chambers, R. L. ....	98	
Chandler, J. F. ....	117	
Changnon, S. A., Jr. ....	47 - 53,	324
Chapra, S. C. ....	54,	366

Charlier, R. H. ....	55
Chau, Y. K. ....	148
Chen, R. L. ....	31, 56
Cherkauer, D. S. ....	57
Chesters, G. ....	365
Chicago Dock and Harbor Authority .....	58
Chicago Park District .....	59
Chicago Sanitary District .....	60, 61
Chin, Y.-P. ....	62
Chrzastowski, M. J. ....	63, 118, 351
Claflin, L. W. ....	153
Clamen, M. ....	64
Clark, D. ....	251
Claussen, J. E. ....	310
Clayton, T. D. ....	314
Clinton, D. ....	65
Clites, A. H. ....	20, 66
Cohen, S. J. ....	67 - 69, 132
Cole-Misch, S. ....	70
Coleman, J. G. ....	71
Commercial Club of Chicago .....	72
Conger, D. H. ....	73
Conley, D. J. ....	74 - 77
Consoer, Townsend and Associates, Ltd. ....	78
Converse, H. ....	251
Conway, H. L. ....	306

ILLINOIS GEOLOGICAL  
SURVEY LIBRARY  
SEP 14 1992

Coote, D. G. ....	365
Council of Great Lakes Governors .....	79
Croley, T. E., II. ....	80, 81
Curth, P. ....	227
Danek, L. J. ....	315
Davenport, T. E. ....	110
Davis, R. A., Jr. ....	82
Dearborn, H. A. S. ....	83
Degroot, R. ....	444
Dempsey, B. G. ....	74
DePinto, J. V. ....	475, 476
Derecki, J. A. ....	84
Desor, E. ....	85, 86
Dolan, D. M. ....	87
Domurat, G. ....	251
Donahue, M. J. ....	88 - 91
Doss, P. K. ....	454
Dowdeswell, E. ....	404
Downs, W. ....	92
Dreher, F. C. ....	93
Drescher, W. J. ....	93
Dubois, R. N. ....	94
Dunn, D. L. ....	95
Durbahn, C. A. ....	2
Dworsky, L. B. ....	96, 97
Eadie, B. J. ....	98, 117, 366, 448
Easter, K. W. ....	115

Edgington, D. N. ....	99
Effler, S. W. ....	100
Eggleton, F. E. ....	101, 102
Eng, P. ....	386
Epifanio, J. M. ....	310
Erickson, R. M. ....	158, 159
Eshenroder, R. L. ....	103, 385
Essick, M. G. ....	104, 105
Evans, M. S. ....	106
Evans, O. F. ....	107
Fabacher, D. L. ....	108
Fahnenstiel, G. L. ....	218
Failing, J. C. ....	24
Feely, A. ....	109
Fenelon, J. M. ....	16, 453
Fenner, K. A. ....	110
Fitzpatrick, W. P. ....	21
Forstner, U. ....	111
Fortson, E. P., Jr. ....	112
Foster, J. W. ....	113
Fraser, G. S. ....	114
Frerichs, S. ....	115
Fullerton, M. K. ....	116
Futyma, R. P. ....	183
Gannon, J. E. ....	331
Gardner, W. S. ....	117
Garlich, M. J. ....	118



Gayton, L. D. ....	119
Geist, R. D. ....	87
Gifford, A. R. ....	120
Glatfelter, D. R. ....	121
Glover, R. M. ....	448
Goldberg, E. D. ....	146
Goldsmith, V. ....	82
Goldsmith, Y. W. ....	82
Goodwin, Z. M. ....	326
Gottlieb, E. S. ....	122
Graham, E. N. ....	121
Graham, J. D. ....	123, 124
Great Lakes Commission ....	125, 126
Great Lakes United's Water Quality Task Force ....	127
Green, A. G. ....	18, 288
Green, T. ....	345
Grima, A. P. ....	128, 401
Gunnison, D. ....	31
Hadley, D. W. ....	129
Hakansson, H. ....	391
Hall, J. ....	130
Hallett, D. J. ....	131, 148, 149
Hanchey, J. R. ....	384
Hare, F. K. ....	132
Harper, M. ....	210
Harris, D. L. ....	133

Harris, H. J. ....	362
Hartig, J. H. ....	134, 135
Hartman, W. L. ....	385
Hartmann, H. C. ....	80, 81
Harza Engineering Co. ....	136
Havlick, S. W. ....	137
Heavey, W. F. ....	138
Heidtke, T. M. ....	139, 476
Helton, J. C. ....	140
Henderson, H. L. ....	141
Henebry, M. ....	339
Hero, C. J. ....	142
Hickcox, D. H. ....	143
Hill, J. R. ....	144
Hjelmfelt, M. R. ....	307
Hochstein, A. B. ....	145
Hodge, V. F. ....	146
Hodges, L. T. ....	147
Hodson, P. V. ....	148, 149
Holcombe, W. H. ....	150, 151
Holland, R. E. ....	152, 153
Hollingsworth, J. A. ....	154
Holm, N. P. ....	155 - 157
Holmstrom, B. K. ....	158, 159
Hoover, J. A. ....	470
Horton, A. H. ....	17
Horvath, F. J. ....	160

Hough, J. L. ....	161
Housley, J. G. ....	167
Howard, W. A. ....	162
Huang, K.-Y. ....	163, 164
Hubbard, B. ....	165
Huckins, J. N. ....	166
Hudson, R. Y. ....	167
Huff, F. A. ....	168
Huffman, G. C. ....	169, 170
Hughes, B. J. ....	475
Humphreys, C. R. ....	120
Hutchinson, D. R. ....	236
Ibach, J. ....	210
Illinois Environmental Protection Agency .....	171 - 173
Illinois Sanitary Water Board .....	174
International Joint Commission .....	175 - 182
Jackson, S. T. ....	183
Jannereth, J. H. ....	184
Jannereth, M. R. ....	160
Jeffs, D. N. ....	365
Jirberg, R. J. ....	185
Johnson, Johnson, & Roy, Inc. ....	186 - 190
Johnson, M. G. ....	191
Joshi, S. R. ....	358
Jude, D. J. ....	464 - 467
Kakuris, P. A. ....	192, 193

Kalff, J. ....	327
Kammerer, P. A., Jr. ....	158, 159
Kangas, J. W. ....	403
Kaplan, J. ....	194
Katkin, W. F. ....	195
Keel, R. T. ....	196
Keen, C. S. ....	307
Keeney, D. R. ....	56
Keillor, J. P. ....	197
Keilty, T. J. ....	198, 199
Kenaga, D. ....	200
Kessler, W. V. ....	337
Kingery, R. ....	201
Kingham, J. D. ....	400
Kingman, J. J. ....	202
Kingston, J. C. ....	203
Kirk, J. R. ....	204 - 206
Kleinhaus, J. R. ....	353
Konrad, T. C. ....	365
Kopec, R. J. ....	207
Koppelman, J. B. ....	310
Kosobud, R. F. ....	208
Kott, R. ....	277
Kreis, R. G., Jr. ....	209, 388
Kreutzberger, W. A. ....	210
Krohe, J., Jr. ....	211
Kroodsma, R. F. ....	212



Krumbein, W. C. ....	213 - 215
Kupke, J. E. ....	216
Lachlan, R. ....	217
Ladewski, T. B. ....	203
Laird, G. A. ....	218
Lake Michigan Federation ....	219
LaMoe, J. P. ....	37, 220
Landrum, P. F. ....	198, 199
Lang, G. A. ....	218, 366
Lanman, J. H. ....	221
Lapham, I. A. ....	222
Lardner, J. P. ....	223
Larowe, B. T. ....	224
Larson, H. E. ....	225
Larson, J. W. ....	226
Larson, W. W. ....	24
Lasca, N. P. ....	227
Lathrop, R. G., Jr. ....	228 - 233, 243, 447
League of Women Voters ....	234, 235
Lee, M. W. ....	236
Leffler, S. M. ....	49, 53
Leonard, D. J. ....	237
Lesht, B. M. ....	238
LeuVoy, R. L. ....	24
Lewis, S. ....	239
Liebig, J. R. ....	448

Lillesand, T. M. ....	228 - 231, 233, 240, 241 - 243, 446, 447
Lo, T. ....	240, 241
Lohr, T. ....	244
Loiacono, N. J. ....	245
Lowe, R. L. ....	43, 203
Luckowicz, L. J. ....	246
Lulla, K. ....	164
Lum, K. R. ....	247
Lundquist Architects, Inc. ....	248
Lyon, J. G. ....	249
Lyons, W. A. ....	307
Mac, M. J. ....	108
MacIntosh, K. J. ....	7
Magnus, K. R. ....	250
Magoon, O. T. ....	251
Makarewicz, J. C. ....	252, 253
Malczyk, J. M. ....	98, 117
Maloney, J. E. ....	254 - 256
Manam, R. ....	237
Marquardt, T. C. ....	257
Marquette, J. ....	258
Martin, J. L. ....	31
Martin, T. D. ....	450
Maxwell, H. ....	259
Mayer, H. M. ....	260 - 262
McAvoy, P. V. ....	263

McCarthy, J. F. ....	249
McIntosh, A. W. ....	337
McIntosh, T. H. ....	56
McLain, D. R. ....	264
McNaught, D. C. ....	265
McRae, G. ....	328, 329
Meadows, G. A. ....	266
Meinholz, T. L. ....	210
Meyer, R. P. ....	267
Michigan Dept. Nat. Resour. ....	268, 269
Michigan Sea Grant Program ....	270, 271
Michigan Water Resour. Commission ....	272 - 274
Milbrath, L. W. ....	275
Milender, K. W. ....	276
Milkereit, B. ....	288
Miller, A. H. ....	26, 197
Miller, B. B. ....	277
Miller, G. S. ....	122
Milwaukee Citizens' Governmental Research Bureau ....	278
Milwaukee County Agriculture and Extension Committee ....	279
Milwaukee County Committee on Lake Michigan Shore Erosion ....	280
Milwaukee Harbor Commission ....	281 - 284
Miner, D. ....	251
Minnesota Sea Grant Extension Program .....	285
Moll, R. A. ....	5, 346

Monaghan, G. W. ....	286
Montgomery, H. A. ....	287
Morel-a-l'Huissier, P. ....	288
Morgan, B. M. ....	155 - 157
Mortimer, C. H. ....	289
Muller, A. B. ....	140
Munawar, I. F. ....	290
Munawar, M. ....	290
Murnane, R. J. ....	291
Murphy, T. J. ....	292, 293
Musham, H. A. ....	294, 295
Nader, D. C. ....	57
Nalepa, T. F. ....	296
Nalewajko, C. ....	396
Naqvi, S. M. ....	318
National Research Council ....	297
Neal, W. J. ....	314
Neely, W. B. ....	298
Nelson, D. M. ....	1, 99
Nelson, E. W. ....	299
Newberry, T. L. ....	74
Nielson, J. H. ....	300
Noorbakhsh, N. ....	354
North, L. D. ....	351
Nriagu, J. O. ....	148
O'Hanly, J. L. P. ....	301
Oettershagen, M. W. ....	302



Ogden, D. A. D. ....	303
Ogilvie, K. ....	400
Olko Engineering ....	304
Orlandini, K. A. ....	2
Osmundsen, R. C. ....	305
Ostry, R. C. ....	365
Pansic, N. ....	141
Parker, J. I. ....	306
Parrish, C. C. ....	117
Pease, S. R. ....	307
Peck, J. W. ....	308
Pentland, R. L. ....	309
Petty, J. D. ....	166
Peven, C. S. ....	62
Philipp, D. P. ....	310
Philipsborn, C. ....	311
Phillips, D. W. ....	312
Pierce, D. M. ....	313
Pilkey, O. H., Jr. ....	314
Pollman, C. D. ....	315
Poston, H. W. ....	316
Potter, W. G. ....	317
Preston, S. D. ....	22
Pullen, E. J. ....	318
Quigley, M. A. ....	75
Quinn, F. H. ....	319 - 324
Race, R. A. ....	210

Ragotzkie, R. A. ....	36, 362
Randolph, I. ....	325
Raoul, J. ....	326
Rasmussen, J. B. ....	327
Rathke D. E. ....	328, 329
Raynor, A. C. ....	330
Rector, R. L. ....	330
Regier, H. A. ....	331
Reinhard, S. A. ....	332
Reynoldson, T. B. ....	333
Risley, C., Jr. ....	334
Robinson, J. B. ....	365
Roellig, D. A. ....	335, 336
Romano, R. R. ....	337
Rosenbaum, J. G. ....	338
Rosenberg, H. B. ....	309
Ross, P. E. ....	339
Rossmann, R. ....	340
Rousar, D. C. ....	341
Ruggles, D. ....	342
Rutledge, G. K. ....	343
Ryan, L. W. ....	477
Sanderson, M. ....	344
Saylor, J. H. ....	122
Scarpace, F. L. ....	345
Scavia, D. ....	218, 346, 347
Scheflow, D. J. ....	139

Schelske, C. L. ....	74, 75, 77, 348, 349
Schenker, E. ....	350
Schlee, J. S. ....	351
Schmitt, C. J. ....	108
Schoolcraft, H. R. ....	352
Schultz, L. L. ....	353
Schwartz, T. R. ....	166
Schweiger, D. L. ....	354
Seidel, S. L. ....	146
Seils, C. A. ....	402
Sennot, J. W. ....	355
Seyler, H. L. ....	356
Shafer, C. A. ....	160
Shafer, M. M. ....	357
Shealy, R. ....	49, 53
Shedlock, R. J. ....	454
Shen, E. J. ....	30
Shukla, B. S. ....	358
Silliman, S. E. ....	22
Simmons, J. T. ....	359
Smith, J. B. ....	360, 361
Smith, J. H. ....	227
Smith, L. M. ....	166
Smith, P. L. ....	362
Snavely, D. S. ....	363, 364
Sonzogni, W. C. ....	139, 365, 366

Southeastern Wisconsin Regional Planning Commission .....	367 - 383
Stakhiv, E. Z. ....	384
Stankevich, E. A. ....	98
Stanley, J. G. ....	385
Stern, K. ....	200
Stevens, C. W. ....	386
Stockberger, M. T. ....	470
Stoermer, E. F. ....	203, 209, 348, 387, 388 - 391
Stoker, B. A. ....	392
Striegel, A. R. ....	393
Strong, L. A. ....	218
Sudar, A. ....	394
Swackhamer, D. L. ....	395
Tarapchak, S. J. ....	396, 448
Tarlock, A. D. ....	397
Tarr, R. S. ....	398
Taylor, R. W. ....	142
Tetra Tech, Inc. ....	399
Theriot, E. C. ....	391
Thomas, R. L. ....	135, 148, 400
Thompson, R. E., Jr. ....	121
Timmerman, P. ....	401
Tirpak, D. A. ....	360
Tissue, G. T. ....	402
Tobin, L. T. ....	251
Todd, M. J. ....	403



Totten, D. ....	404
Tratman, E. E. R. ....	405
Tunell, G. G. ....	406
U.S. Army Corps of Engineers ....	407 - 430
U.S. Coast Pilot ....	431
U.S. Congress, 101st ....	432
U.S. Dept. of Commerce, National Ocean Service ....	433, 434
U.S. Dept. of Health, Education, and Welfare ....	435
U.S. Engineering Dept. ....	436
U.S. General Accounting Office ....	437
U.S. Geol. Surv. ....	438 - 440
U.S. National Climate Program Office/NOAA ....	441
U.S. National Resources Planning Board ....	442
University of Michigan ....	270
University of Wisconsin ....	443
Vallejo, L. E. ....	444
Vallentyne, J. R. ....	400, 445
Vande Castle, J. R. ....	243, 446, 447
Vanderploeg, H. A. ....	448
VanHoof, P. L. ....	449
Vigmostad, K. E. ....	450
Vogt, J. E. ....	313
W.F. Baird & Associates, Ltd. ....	451
Wahlgren, M. A. ....	1, 2
Wapora, Inc. ....	452

Watson, L. R. ....	453, 454
Weber, W. J., Jr. ....	62
Werren, D. J. ....	7, 455
Whitbeck, R. H. ....	456
White, D. S. ....	198, 199
Whited, C. R. ....	24, 170
Whiting, H. ....	457
Whitnall, C. B. ....	458
Whitney, J. D. ....	113
Whitt, G. S. ....	310
Whittle, D. M. ....	148, 149
Whittlesey, C. ....	459 - 462
Wilcox, D. A. ....	183
Williams, W. G. ....	463
Wilson, J. T. ....	137
Winnell, M. H. ....	464 - 467
Winters, H. A. ....	37, 220
Wisconsin Dept. Nat. Resour. ....	468, 469
Wong, P. T. S. ....	148
Wood, W. L. ....	470, 471
Wortley, C. A. ....	472, 473
Wysockey, M. H. ....	474
Yaguchi, E. M. ....	306
Yang, J. J. ....	387
Young, T. C. ....	200, 475, 476
Yui, A. K. ....	87
Zhang, Y. ....	470

Ziolkowski, L. .... 477

SUBJECT INDEX

accretion .....	192, 215, 222, 266, 336, 375, 378, 399
aerial photography .....	28, 163, 269, 345, 379, 382, 392, 399, 444, 468
air-water interface .....	265, 293, 395
aluminum .....	16, 169, 170, 340, 357
antimony .....	340
aquifer (SA: groundwater) .....	16, 57, 143, 169, 170, 173, 453, 454
Asterionella (SA: diatoms) .....	153, 387
barium .....	16, 169, 170, 340
barometric pressure .....	227, 307, 313
bathymetry (SA: mapping) .....	189, 190, 220, 227, 267, 351, 382, 447, 463
beach_nourishment .....	10, 193, 318, 335, 336, 381, 382, 383
beaches .....	7, 9, 10, 32, 35, 53, 59, 71, 82, 94, 107, 157, 162, 165, 187, 189, 192, 193, 213, 214, 215, 257, 300, 314, 318, 328, 335, 336, 375, 377, 381, 382, 383, 376, 378, 425, 426, 427, 451, 455, 459, 471
beaches_erosion .....	7, 32, 35, 59, 82, 157, 162, 187, 192, 214, 215, 314, 318, 336, 376, 377, 378, 382, 383, 425, 426, 427, 451, 471

beaches_geomorphology .....	7, 35, 71, 157, 165, 257, 459
beaches_grain size .....	71, 189, 336, 381
beaches_recreation .....	53, 59, 187, 375, 425, 426, 427, 455
bedrock .....	136, 161, 173, 453
benthic invertebrates .....	30, 40, 101, 102, (SA: clams) 106, 117, 148, 149, (SA: snails) 157, 174, 198, 199, 296, 318, 327, 328, 333, 346, 379, 380, 381, 391, 432, 452, 464 - 467
benthic invertebrates_abundance .....	30, 101, 102, 106, 328, 464 - 467
benthic invertebrates_bioaccumulation ....	149, 198, 199, 333
benthic topography (S: topography_benthic)	
beryllium .....	169, 170, 340
bibliography .....	14, 155, 156, 157, 227, 279, 452
bioturbation .....	149, 198, 199, 333, 346, 347
bluffs (general) .....	7, 37, 162, 192, 193, 220, 239, 248, 276, 375, 376, 382, 383, 377, 392, 399, 444
bluffs_erosion .....	7, 37, 162, 192, 220, 239, 276, 382, 383, 376, 377, 444
bluffs_recession .....	37, 375, 376, 377, 382, 399, 444
bluffs_slumping .....	162, 399
breakwaters (SA: coastal structures) .....	7, 8, 23, 28, 32, 59, 112, 119, 138, 202, 215, 283,



breakwaters (continued) .....	284, 303, 314, 317, 325, 376, 377, 379, 382, 383, 405, 424, 455, 474, 477
bulkheads (SA: coastal structures) .....	10, 63, 119, 215, 235, 314, 317, 376, 377, 382, 399, 474
cadmium .....	16, 95, 111, 139, 169, 170, 247, 328, 329, 333, 337, 340, 357, 379, 380, 381, 440
calcite .....	448
calcium .....	16, 24, 93, 169, 170, 357, 440, 448
calcium carbonate .....	357, 448
carbon dioxide .....	48, 53, 132, 208, 324, 321, 344, 360
carbon-14 (SA: dating) .....	257
cesium .....	2, 99, 140, 198, 199, 329
chemistry (S: geochemistry, inorganics, metals, organics, radionuclides, or sediments_chemistry)	
chlorinated hydrocarbons (S: organics)	
chromium .....	16, 98, 111, 169, 170, 328, 329, 333, 340, 357, 379, 381, 440
circulation (SA: currents) .....	6, 20, 227, 359
circulation_model (S: model_circulation)	
clams .....	101, 102, 432, 464, 465, 466
clay .....	142, 222, 286, 352, 460

climate (SA: history_climate) .....	12, 33, 46, 47, 48, 50, 51, 52, 53, 67, 68, 69, 80, 81, 132, 133, 157, 207, 208, 227, 295, 297, 312, 321, 322, 324, 326, 344, 360, 361, 364, 365, 380, 384, 400, 401, 404, 441
climate_lake levels .....	46, 47, 52, 53, 67, 68, 80, 81, 132, 208, 295, 297, 321, 322, 324, 326, 344, 380, 384, 400, 401, 441
coastal_management .....	7 - 10, 13, 23, 26, 28, 32, 45, 47, 52, 53, 59, 61, 63, 72, 89, 104, 105, 118, 119, 123, 125, 128, 138, 141, 150, 151, 157, 160, 162, 175, 177, 184, 187, 189, 190, 192, 193, 197, 201, 202, 211, 212, 214, 215, 219, 227, 235, 239, 251, 262, 266, 270, 271, 273, 280, 281 - 284, 289, 297, 299, 300, 303, 305, 311, 314, 317, 318, 325, 330, 335, 336, 371, 375 - 379, 381, 382, 383, 394, 399, 401, 405, 409, 410, 411, 413, 417 - 420, 422, 424 - 428, 432, 437, 451, 458, 470, 471, 474, 477
coastal_mapping (S: mapping_coastal)	
coastal_structures .....	7 - 10, 23, 28,
(SA: specific types of structures)	32, 47, 52, 53, 59, 63, 104, 105, 112, 118, 119, 138, 141, 150, 151, 157, 162, 175, 187, 189, 190, 192, 193, 201,

coastal structures (continued) .....	202, 211, 215, 235, 239, 251, 266, 271, 281, 283, 284, 289, 297, 303, 314, 317, 325, 330, 351, 376, 377, 379, 382, 399, 405, 424, 471, 473, 474, 477
cobalt .....	169, 170, 340
connecting channels .....	17, 46, 60, 84, 111, 131, 145, 177, 179, 247, 254, 255, 256, 260, 320, 322, 323, 326, 328, 350, 355, 363, 364, 386, 403, 406, 424, 425, 427, 428, 431, 433, 442
copper .....	16, 22, 98, 111, 139, 169, 170, 315, 329, 333, 340, 357, 379, 380, 381, 402
coring (S: sediment cores)	
crustal movements .....	113
currents .....	19, 20, 21, 32, 44, 66, 122, 157, 189, 210, 214, 215, 227, 238, 250, 313, 380, 435, 473, 474
currents_mapping (S: mapping_currents)	
currents_model (S: model_currents)	
currents_remote sensing .....	66, 157
currents_transport .....	21, 189, 215, 238, 380
Cyclotella (SA: diatoms) .....	76, 153, 290, 387, 448
dating (SA: carbon-14; SA: lead-210) .....	257, 358
deposition_inorganics .....	1, 56, 79, 111, 139, 140, 148, 180, 328, 329, 469

deposition_metals ..... (includes trace metals)	1, 79, 111, 139, 140, 148, 328, 329
deposition_organics .....	79, 131, 180, 293, 328, 329, 469
deposition_radionuclides .....	1, 140, 329
deposition_sediments (S: sediments_deposition)	
detritus ..... (SA: organic matter) (SA: particles)	106, 265, 396, 448
Diatoma (SA: diatoms).....	387
diatoms (SA: specific species) .....	43, 75, 76, 152, 153, 203, 209, 218, 306, 348, 349, 357, 387 - 391
dissoved oxygen (SA: oxygen) .....	16, 24, 41, 61, 98, 158, 159, 210, 379, 380, 440
dissoved solids .....	24, 93, 111, 158, 159, 163, 169 - 172, 264
diversion ..... (SA: environmental impact_diversion)	11, 40, 46, 51, 61, 115, 157, 179, 182, 195, 204, 205, 206, 262, 283, 301, 313, 319, 322, 323, 329, 344, 386, 400, 474
drainage (SA: runoff) .....	162, 256, 301, 377, 382
drainage basin (SA: watershed) .....	51, 79, 139, 143, 173, 177, 256, 324, 367 - 370, 373, 374, 432, 442, 453
dredging ..... (SA: environmental impact_dredging)	23, 31, 34, 52, 61, 96, 98, 126, 127, 176, 235, 251, 283, 284, 289, 290, 322, 379, 381, 409, 410, 411, 424, 437, 469, 477

EH (S: redox)	
environmental impact_diversion .....	46, 386
(SA: diversion)	
environmental impact_dredging .....	381, 409 - 411, 437
(SA: dredging)	
environmental impact_navigation .....	145, 160
(SA: navigation; SA: shipping)	
erosion .....	7, 13, 21, 32,
(SA: beaches_erosion)	35, 37, 47, 59,
(SA: bluffs_erosion)	78, 82, 92, 94,
(SA: history_erosion)	111, 114, 125, 129,
(SA: lake_levels_erosion)	140, 145, 148, 157,
(SA: model_erosion)	160, 162, 184, 187,
(SA: shoreline_erosion)	192, 193, 201, 211,
	214, 215, 219, 220,
	222, 227, 235, 239,
	251, 259, 262, 266,
	270, 271, 272, 274,
	276, 279, 280, 289,
	297, 300, 304, 305,
	314, 318, 335, 336,
	338, 353, 376, 377,
	378, 382, 383, 392,
	393, 399, 403, 413,
	425 - 428, 443, 444,
	451, 470, 471, 474
evaporation (SA: water budget) .....	29, 33, 194, 264,
	354
fecal pellets .....	448
flooding .....	13, 61, 73, 92,
	114, 160, 187, 227,
	235, 268, 305, 371,
	378, 379, 393, 403,
	416, 422, 423, 425,
	426 - 428
fossils .....	76, 147, 183, 257,
	277
Fragilaria (SA: diatoms) .....	153, 387
geochemistry .....	216, 357
(SA: inorganics; SA: metals)	
(SA: sediments_chemistry)	



geomorphology .....	7,	35,	71,	85,
(SA: beaches_geomorphology)	86,	120,	130,	136,
(SA: lake_levels_geomorphology)	144,	147,	157,	165,
	227,	250,	257,	267,
	399,	454,	459,	474
glacial (SA: sediments_glacial) .....	25,	113,	130,	157,
	222,	257,	277,	286
grain size_beaches				
(S: beaches_grain size)				
grain size_particles .....	116,	448,	449	
grain size_sediments .....	189,	190,	336,	381,
	448,	449		
gravel .....	173,	302,	335,	336,
	383			
greenhouse effect .....	12,	48,	53,	67,
	68,	69,	81,	132,
	194,	208,	297,	321,
	324,	326,	344,	360,
	401,	404,	441	
groins (SA: coastal structures) .....	7,	32,	104,	105,
	150,	151,	162,	215,
	235,	330,	376,	377,
	382,	383,	399,	474
groundwater .....	11,	16,	24,	57,
(SA: aquifer)	79,	89,	93,	121,
(SA: hydrology_groundwater)	127,	158,	159,	169,
(SA: model_groundwater)	170,	173,	245,	376,
	377,	380,	382,	453,
	454			
harbors .....	3,	4,	23,	27,
(SA: sediments_harbors)	28,	30,	34,	53,
	58,	61,	72,	112,
	123,	126,	145,	167,
	202,	225,	235,	244,
	251,	269,	281,	282,
	283,	299,	325,	335,
	350,	356,	375,	379,
	380,	381,	407 - 412,	
	414,	415,	417 - 421,	
	424,	425,	427,	428,
	429,	436,	472,	473,
	477			

history (SA: glacial; SA: paleoecology) (SA: paleontology)	
history_climate .....	312
history_coastal .....	28, 59, 141, 187,
(SA: shoreline_history)	377, 378, 379, 399,
	477
history_erosion .....	59, 187, 222, 377,
	378, 399
history_geology .....	25, 28, 59, 96,
	113, 130, 157, 187,
	222, 257, 277, 286,
	352, 377, 378, 379,
	399, 477
history_glacial (S: glacial)	
history_lake levels	
(S: lake levels_history)	
history_land use .....	96, 97, 141, 187,
	377, 378, 379
history_sediments .....	96, 157, 187, 222,
	286, 349, 377, 378,
	379, 399
history_shipping .....	226, 332, 356
Holocene (SA: glacial; SA: history) .....	183, 257
hydraulics .....	6, 64, 175, 179,
	295, 323
hydrology (general).....	16, 17, 21, 29,
	33, 38, 51, 57,
	67, 80, 127, 142,
	155, 156, 169, 175,
	182, 208, 264, 297,
	320, 321, 323, 344,
	354, 364, 367 - 370,
	372, 373, 374, 376,
	377, 380, 382, 452,
	453, 454
hydrology_groundwater .....	16, 57, 127, 169,
(SA: groundwater)	376, 377, 380, 382,
	453, 454

hydrology_lake levels .....	29,	67,	80,	175,
(SA: lake levels)	182,	208,	297,	321,
	323,	344,	354,	376,
	377,	380,	382,	452,
	453			
hydrology_model (S: model_hydrology)				
hydrology_precipitation .....	29,	33,	51,	182,
(SA: precipitation)	175,	320,	323,	354,
	377			
hydrology_runoff (S: runoff)				
hydrology_summary				
(S: summary_hydrology)				
hydrology_tributaries				
(S: tributaries_hydrology)				
hydrology_water budget (S: water budget)				
hydrology_water supply (S: water supply)				
ice .....	11,	12,	42,	82,
	185,	190,	224,	313,
	343,	379,	380,	399,
	472,	473		
inorganics (general, no specific				
inorganics named) .....	79,	96,	103,	157,
(SA: specific inorganic elements)	171,	172,	174,	229,
(SA: metals or radionuclides)	264,	366,	387,	432,
	452			
inorganics_deposition				
(S: deposition_inorganics)				
inorganics_loading .....	22,	41,	54,	56,
	87,	98,	111,	139,
	148,	149,	180,	196,
	247,	315,	328,	329,
	337,	341,	365,	379,
	380,	381,	476	
inorganics_mass balance				
(S: mass_balance_inorganics)				
inorganics_metals (S: metals)				
inorganics_model (S: model_inorganics)				

lake levels (general; continued) .....	94,	96,	97,	109,
	114,	121,	124,	128,
	132,	141,	143,	157,
	160,	175,	177,	179,
	180,	181,	182,	187,
	189,	190,	194,	201,
	208,	217,	221,	227,
	250,	251,	254,	255,
	256,	258,	259,	262,
	268,	277,	283,	289,
	294,	295,	297,	301,
	309,	311,	314,	317,
	319,	321 - 324,	326,	
	329,	336,	342,	344,
	351,	359,	376,	377,
	380,	382,	384,	386,
	394,	397,	399,	400,
	401,	403,	416,	423,
	424,	428,	430,	433,
	434,	441,	443,	450,
	452,	453,	457,	462,
	471,	473,	474	
lake levels_climate (S: climate_lake levels)				
lake levels_erosion .....	32,	47,	59,	94,
	114,	157,	160,	187,
	201,	227,	251,	259,
	262,	289,	297,	314,
	336,	376,	377,	382,
	399,	403,	428,	443,
	471,	474		
lake levels_geomorphology .....	157,	227,	250,	399,
	474			
lake levels_history .....	40,	59,	60,	96,
	97,	141,	157,	187,
	221,	255,	277,	377,
	399			
lake levels_hydrology (S: hydrology_lake levels)				
lake levels_management .....	23,	32,	40,	46,
	47,	52,	53,	59,
	60,	61,	64,	89,
	96,	97,	109,	128,
	141,	143,	157,	160,
	175,	177,	179,	181,
	182,	187,	189,	190,
	201,	227,	251,	262,

inorganics\_radionuclides  
(S: radionuclides)

inorganics\_sediments ..... 2, 15, 24, 38,  
(SA: metals\_sediments) 41, 54, 56, 74,  
(SA: phosphorus\_sediments) 75 - 77, 95, 96,  
(SA: radionuclides\_sediments) 98, 99, 103, 111,  
117, 127, 140, 143,  
146, 148, 149, 157,  
158, 159, 173, 174,  
198, 199, 210, 216,  
218, 247, 291, 315,  
327, 328, 329, 333,  
337, 346, 347, 349,  
357, 358, 362, 366,  
379, 380, 381, 448,  
449, 469, 475

inorganics\_summary  
(S: summary\_inorganics)

inorganics\_transport ..... 15, 98, 140, 347,  
366, 380, 449

institutions ..... 26, 39, 40, 47,  
64, 70, 79, 88,  
89 - 91, 96, 97,  
115, 125, 128, 134,  
177, 181, 182, 186,  
195, 211, 261, 263,  
273, 275, 297, 305,  
311, 314, 331, 375,  
378, 379, 384, 397,  
404, 432, 450, 469

invertebrates  
(S: benthic\_invertebrates)

iron ..... 16, 22, 93, 98,  
169, 170, 337, 340,  
402, 440

jetties (SA: coastal structures) ..... 9, 28, 215, 235,  
317, 405, 471

lake effect ..... 207, 307

lake levels (general) ..... 6, 11, 23, 24,  
29, 32, 40, 46,  
47, 49, 52, 53,  
59, 60, 61, 64,  
65, 67, 68, 80,  
81, 83, 84, 89,



lake levels_management (continued) .....	283,	289,	297,	311,
	314,	317,	323,	336,
	382,	376,	377,	380,
	394,	399,	400,	401,
	403,	424,	428,	452,
	471,	474		
lake levels_model .....	53,	67,	94,	132,
	189,	190,	208,	227,
	251,	297,	309,	319,
	321,	323,	324,	344,
	359,	380,	403,	441,
	453			
lake levels_monitoring .....	11,	40,	143,	180,
	251,	329,	380,	403,
	450,	453		
lake levels_precipitation (S: precipitation_lake levels)				
lake levels_research needs (S: research needs_lake levels)				
lake levels_review (S: review_lake levels)				
lake levels_seiche .....	61,	65,	380,	473
(SA: seiche)				
lake levels_shoreline (S: shoreline_lake levels)				
lake levels_summary (S: summary_lake levels)				
land use .....	11,	16,	21,	26,
(SA: history_land use)	53,	54,	79,	96,
(SA: mapping_land use)	97,	141,	143,	160,
(SA: review_land use)	182,	187,	191,	227,
(SA: shoreline_land use)	241,	242,	251,	261,
(SA: summary_land use)	262,	297,	334,	365,
	375,	377,	378,	379,
	380,	393,	394,	397,
	432,	441,	454,	469
lead .....	16,	22,	98,	111,
	139,	148,	169,	170,
	315,	328,	329,	333,
	337,	340,	357,	379,
	380,	381,	402,	440,
	449			

lead-210 .....	358
(SA: dating; SA: radionuclides)	
littoral drift .....	32, 187, 189, 215,
(SA: sediments_transport)	250, 266, 399
loading_inorganics	
(S: inorganics_loading)	
loading_sediments	
(S: sediments_loading)	
loading_tributaries	
(S: tributaries_loading)	
magnesium .....	16, 24, 169, 170,
	440
manganese .....	16, 98, 169, 170,
	329, 333, 340, 381,
	440
mapping (general) .....	28, 30, 72, 157,
(SA: bathymetry)	163, 164, 169, 190,
	215, 221, 227 - 231,
	240, 241, 242, 249,
	250, 269, 325, 334,
	351, 353, 375 - 380,
	382, 383, 435, 440,
	447, 453, 456, 463
mapping_coastal .....	28, 72, 157, 190,
	215, 227, 249, 325,
	351, 375 - 379, 382,
	383
mapping_currents .....	157, 215, 227, 250,
	380, 435
mapping_land use .....	227, 241, 242, 334,
	375, 377, 378, 379,
	380
mapping_remote sensing .....	157, 163, 164, 227,
	228 - 231, 240, 241,
	242, 249, 334, 447
mapping_shoreline .....	169, 190, 215, 221,
	227, 351, 353, 375,
	376 - 378, 382, 383,
	453, 456

mass balance_inorganics .....	38, 41, 148, 247, 328, 329, 347, 366, 469
mass balance_organics .....	131, 298, 328, 329, 366, 469
Melosira (SA: diatoms) .....	76, 153, 387
mercury .....	16, 111, 127, 169, 170, 328, 329, 340, 381, 440
metals .....	1, 2, 16, 22, (SA: specific metals) 38, 79, 93, 95, 98, 99, 103, 111, 127, 139, 140, 146, 148, 149, 169 - 174, 191, 196, 198, 199, 216, 315, 328, 329, 333, 337, 340, 357, 358, 366, 379, 380, 381, 402, 432, 440, 449, 452
metals_deposition (S: deposition_metals)	
metals_model (S: model_metals)	
metals_sediments .....	2, 38, 79, 95, 98, 99, 103, 111, 127, 140, 146, 148, 149, 173, 174, 198, 199, 216, 315, 328, 329, 333, 337, 357, 358, 366, 379, 380, 381, 449
meteorology (S: climate, ice, lake effect, precipitation, storms, or wind)	
minerals .....	352
model_circulation .....	20, 227, 359
model_currents .....	20, 21, 66, 189, 210, 227, 238, 380
model_erosion .....	7, 21, 94, 145, 148, 220, 227, 251, 266, 297, 403, 413,

model_erosion (continued) .....	444			
model_groundwater .....	380,	453,	454	
model_hydrology .....	21,	67,	142,	208,
	297,	321,	323,	344,
	364,	380,	453,	454
model_inorganics .....	22,	41,	54,	76,
	77,	148,	163,	210,
	291,	327,	347,	357,
	358,	366,	380,	396,
	476			
model_lake levels (S: lake levels_model)				
model_metals .....	22,	148,	357,	358,
	366,	380		
model_runoff .....	21,	131,	148,	380,
	403			
model_sediments .....	21,	41,	54,	62,
	76,	77,	94,	131,
	142,	148,	161,	189,
	190,	210,	220,	238,
	266,	291,	293,	298,
	327,	347,	357,	358,
	366,	380,	403,	453
model_water budget .....	67,	208,	297,	321,
	323,	344,	453	
model_waves .....	7,	27,	112,	145,
	167,	189,	190,	220,
	227,	238,	266,	380,
	344			
model_wind .....	66,	189,	190,	238,
	307,	380		
modeling (S: model)				
molybdenum .....	169,	170,	340,	402
moraine .....	399			
navigation .....	51,	52,	61,	72,
(SA: shipping)	96,	145,	160,	226,
	260,	281,	284,	305,
	326,	332,	350,	355,
	356,	400,	404,	406,

navigation (continued) .....	407, 414, 415, 422, 424 - 429
net basin supply (S: water budget)	
nickel .....	98, 111, 169, 170, 328, 329, 340, 379, 381, 402
organic carbon .....	41, 62, 98, 116, 166, 169, 333, 380, 381
organic matter .....	216, 265
organics_deposition (S: deposition_organics)	
organics_mass balance (S: mass balance_organics)	
organics_review (S: review_organics)	
organics_sediments .....	15, 24, 62, 79, 96, 103, 108, 127, 131, 166, 173, 174, 198, 199, 200, 244, 265, 293, 298, 315, 328, 329, 333, 362, 366, 379, 381, 395, 469
oxygen .....	16, 24, 41, 54, 61, 98, 158, 159, 210, 362, 379, 380, 381, 440
paleoclimatology (SA: climate) .....	257
paleoecology .....	76, 183, 277
(SA: fossils; SA: glacial) (SA: history)	
paleontology .....	147
particulates (S: particles)	
particles .....	1, 2, 43, 100, 111, 116, 117, 148, 218, 243, 247, 292, 327, 340, 347, 349, 357, 362, 380, 402,
(SA: grain size_particles)	



particles (continued) .....	448, 449, 475
particles_transport .....	347, 380, 449
particle size (S: grain size)	
phosphorus_sediments .....	38, 41, 54, 75, 98, 127, 143, 158, 327, 328, 329, 333, 349, 357, 379, 380, 381, 448, 369, 475
physiography .....	82, 250
phytoplankton_sediments .....	54, 75, 76, 149, 218, 265, 290, 328, 346, 347, 349, 357, 362, 380, 391, 448, 469
plutonium .....	1, 2, 99
pore water .....	77, 291, 347
(SA: sediment-water interface)	
precipitation .....	1, 29, 33, 46, 47, 51, 53, 68, 69, 93, 97, 121, 132, 143, 158, 159, 168, 175, 179, 182, 194, 227, 292, 307, 312, 313, 320, 323, 324, 329, 354, 377, 403
(SA: snow)	
precipitation_hydrology (S: hydrology_precipitation)	
precipitation_lake levels .....	29, 46, 47, 53, 68, 97, 121, 132, 143, 175, 179, 182, 194, 227, 323, 324, 329, 354, 377, 403
precipitation_water budget .....	29, 33, 51, 175, 182, 320, 323, 354
Quaternary (SA: history) .....	103, 257, 277
radiocarbon (S: carbon-14)	
radionuclides .....	1, 2, 95, 99, (SA: specific radionuclides) 140, 198, 199, 257,

radionuclides (continued) .....	329, 358, 366
(SA: deposition_radionuclides)	
radionuclides_sediments .....	2, 95, 99, 140, 198, 199, 329, 358, 366
rain (S: precipitation)	
recession	
(S: bluffs_recession)	
(S: erosion)	
(S: shoreline_recession)	
redox .....	103, 147, 251, 308, 385
remote sensing .....	66, 143, 157, 161, 163, 164, 185, 224, 227 - 233, 240, 241, 242, 243, 249, 251, 307, 334, 343, 345, 403, 446, 447
(SA: aerial photography)	
(SA: currents_remote sensing)	
(SA: mapping_remote sensing)	
research needs_geology .....	137, 143, 161, 270, 403, 450
research needs_lake levels .....	143, 403, 450
resuspension .....	95, 98, 140, 148, 238, 327, 347, 362, 366, 469
revetments (SA: coastal structures) .....	7, 23, 32, 59, 63, 141, 187, 189, 190, 215, 235, 239, 283, 284, 314, 376, 382, 383, 455, 474
review (SA: summary)	
review_geology .....	247, 266, 352, 362
review_inorganics .....	61, 79, 127, 149, 247, 333, 347, 362, 365, 396, 452
review_lake levels .....	61, 452
review_land use .....	79, 365
review_organics .....	79, 127, 131, 265, 333, 362, 365, 452

riprap (SA: coastal structures) .....	202, 377, 382, 399
river (S: tributaries)	
runoff .....	17, 21, 61, 97,
(SA: model_runoff)	121, 127, 131, 139,
	148, 158, 159, 174,
	175, 194, 313, 315,
	328, 365, 367 - 370,
	372, 373, 374, 380,
	403, 432
sand .....	107, 173, 215, 302,
	336, 351, 352
sand bar .....	94, 215
sand dunes .....	86, 144, 183, 212,
	214, 251, 257, 381,
	453
satellite (S: remote sensing)	
seawalls (SA: coastal structures) .....	32, 215, 235, 314,
	405, 474
sediment cores .....	74 - 77, 136, 190,
(SA: sediments)	291, 380, 395, 450,
	453
sediment traps .....	2, 31, 103, 117,
	122, 357, 380, 391,
	449
sediment-water interface .....	30, 31, 291, 327,
	347, 380
sedimentation .....	7, 38, 74, 75,
	77, 82, 95, 99,
	114, 125, 145, 173,
	194, 218, 298, 315,
	349, 358, 362, 380,
	399, 449
sediments_chemistry (SA: geochemistry).....	2, 15, 21, 24,
(SA: inorganics_sediments)	31, 38, 41, 54,
(SA: metals_sediments)	56, 62, 74 - 77,
(SA: organics_sediments)	79, 95, 96, 98,
(SA: phosphorus_sediments)	99, 103, 108, 111,
(SA: radionuclides_sediments)	117, 121, 127, 131,
	137, 140, 143, 146,
	148, 149, 157, 158,
	159, 166, 173, 174,

sediments_chemistry (continued) .....	187,	198,	199,	200,
	210,	216,	218,	244,
	247,	265,	290,	291,
	293,	298,	315,	327,
	328,	329,	333,	337,
	346,	347,	349,	357,
	358,	362,	366,	379,
	380,	381,	395,	448,
	449,	450,	453,	469,
	475			
sediments_deposition .....	21,	56,	79,	111,
(SA: sedimentation)	131,	140,	148,	293,
	328,	329,	469	
sediments_distribution .....	74,	189,	464,	465,
	466			
sediments_glacial .....	157,	222,	277,	286
sediments_grain size (S: grain_size_sediments)				
sediments_harbors .....	30,	244,	283,	335,
	379,	380,	381,	427,
	428			
sediments_history (S: history_sediments)				
sediments_inorganics (S: inorganics_sediments)				
sediments_loading .....	41,	54,	56,	98,
	111,	131,	148,	149,
	247,	293,	298,	315,
	328,	329,	337,	379,
	380,	381,	395	
sediments_metals (S: metals_sediments)				
sediments_model (S: model_sediments)				
sediments_organics (S: organics_sediments)				
sediments_phosphorus (S: phosphorus_sediments)				
sediments_radionuclides (S: radionuclides_sediments)				
sediments_transport .....	15,	21,	94,	187,
(SA: littoral drift)	189,	215,	238,	259,
	302,	336,	347,	380,
	450			

sediments_tributaries (S: tributaries_sediments)	
seiche .....	38, 61, 65, 154, 362, 380, 473
seismic .....	18, 136, 161, 236, 288
selenium .....	149, 169, 170, 328, 329, 340, 379, 381, 402, 440
shipping .....	46, 47, 51, 52, 53, 67, 68, 195, (SA: navigation) (SA: history_shipping) 226, 260, 281 - 285, 294, 332, 350, 356, 412, 441
shoreline .....	5, 7, 9, 10, 13, 16, 20, 21, 27, 32, 35, 37, 42, 47, 49, 53, 57, 59, 63, 64, 78, 82, 86, 92, 93, 94, 96, 104, 105, 107, 111, 114, 120, 125, 129, 136, 137, 144, 145, 150, 151, 160, 165, 169, 170, 183, 184, 186, 187 - 190, 192, 193, 197, 201, 202, 211, 212, 213, 215, 219, 220 - 222, 227, 235, 239, 245, 246, 248, 251, 259, 261, 262, 266, 268, 270 - 274, 276, 278, 279, 280, 286, 289, 297, 300, 302 - 305, 314, 317, 318, 330, 336, 338, 351, 352, 353, 371, 375 - 378, 382, 383, 393, 394, 399, 403, 405, 413, 422, 423, 425, 427, 428, 443, 444, 450, 451, 453, 455, 456, 458, 459, 460, 468, 469, 471, 474



shoreline_erosion .....	7,	13,	21,	32,
(SA: erosion)	35,	37,	47,	59,
	78,	82,	92,	94,
	111,	114,	125,	129,
	145,	160,	184,	187,
	192,	193,	201,	211,
	215,	219,	220,	222,
	227,	235,	239,	251,
	259,	262,	266,	270,
	271,	272,	274,	276,
	279,	280,	289,	297,
	300,	304,	305,	314,
	318,	336,	338,	353,
	376,	377,	378,	382,
	383,	393,	399,	403,
	413,	425,	427,	428,
	443,	444,	451,	471,
	474			
shoreline_history .....	59,	96,	187,	221,
(SA: history_coastal)	222,	286,	352,	377,
	378,	399		
shoreline_lake levels .....	32,	47,	49,	53,
(SA: lake levels)	59,	64,	94,	96,
	114,	160,	187,	189,
	190,	201,	221,	227,
	251,	259,	262,	268,
	289,	297,	314,	317,
	336,	351,	376,	377,
	382,	394,	399,	403,
	423,	428,	443,	450,
	453,	471,	474	
shoreline_land use .....	16,	21,	53,	96,
(SA: land use)	160,	187,	227,	251,
	261,	262,	297,	375,
	377,	378,	393,	394,
	469			
shoreline_mapping				
(S: mapping_shoreline)				
shoreline_recession .....	37,	220,	259,	279,
(SA: bluffs_recession)	353,	378,	375,	376,
(SA: shoreline_erosion)	377,	382,	399,	444,
	471			
silver .....	169,	170,	333,	340,
	379,	381		
snails .....	465,	466,	467	

snow (SA: precipitation) .....	175, 292, 307, 377
soils .....	62, 173, 221, 376, 381, 453
Stephanodiscus (SA: diatoms) .....	76, 153, 387, 391
storms .....	168, 220, 322, 329, 379, 380,
stratigraphy .....	183, 257, 277
strontium .....	140, 169, 170, 340
summary (SA: review)	
summary_geology .....	96, 148, 184, 315, 334, 383, 399, 450
summary_hydrology .....	127, 452
summary_inorganics .....	96, 127, 148, 149, 315, 340, 396, 452
summary_lake levels .....	64, 89, 96, 181, 399, 401, 450, 452, 474
summary_land use .....	96, 334
suspended sediments (S: suspended solids)	
suspended solids .....	2, 22, 38, 145, 173, 232, 228, 233, 238, 243, 247, 265, 315, 328, 357, 362, 366, 380, 440, 449, 469
Tabellaria (SA: diatoms) .....	76, 153, 387
temperature .....	1, 12, 16, 24, 67, 93, 106, 121, 122, 158, 159, 169, 170, 171, 172, 228, 229 - 232, 234, 240, 241, 243, 327, 329, 341, 345, 359, 379, 447, 467
tides .....	65, 124, 217, 342, 380, 457, 462

tin .....	146,	333,	340,	402
topography_benthic .....	161,	250,	351,	381, 399
trace metals (S: metals)				
transportation .....	68,	89,	143,	187,
(SA: navigation; SA: shipping)	195,	350,	406,	407
tributaries .....	15,	22,	24,	38,
	41,	46,	56,	73,
	87,	93,	98,	100,
	108,	121,	131,	134,
	139,	143,	148,	149,
	157,	158,	159,	200,
	244,	247,	328,	329,
	332,	337,	341,	345,
	365,	372,	374,	367,
	368,	369,	370,	380,
	402,	423,	432,	439,
	440,	461,	476	
tributaries_hydrology .....	38,	367 -	370,	372, 374,
	380			
tributaries_loading .....	22,	41,	56,	87,
	98,	131,	139,	148,
	149,	247,	328,	329,
	337,	341,	365,	380, 476
tributaries_sediments .....	15,	24,	38,	41,
	56,	98,	108,	121,
	131,	143,	148,	149,
	157,	158,	159,	200,
	244,	247,	328,	329,
	337,	380		
tritium .....	169,	170		
turbidity .....	24,	61,	100,	163,
	164,	169,	170,	171,
	172,	174,	232,	228,
	243,	381,	447	
vanadium .....	169,	170,	340	
water budget .....	29,	33,	51,	67,
(SA: model_water budget)	80,	175,	182,	208,
(SA: precipitation_water budget)	297,	320,	321,	323, 344,
	354,	453		

water depth .....	1, 30, 101, 102,
(SA: bathymetry)	117, 122, 296
water levels (S: lake levels)	
water supply .....	11, 17, 53, 96,
(SA: water budget)	174, 316, 384
watershed .....	95, 256, 365, 367,
(SA: drainage basin)	368 - 370, 372, 374
waves (SA: seiche) .....	7, 23, 27, 32,
(SA: model_waves)	36, 38, 44, 61,
	65, 112, 124, 133,
	145, 154, 160, 162,
	167, 187, 189, 190,
	214, 215, 220, 227,
	238, 239, 266, 287,
	362, 377, 380, 382,
	399, 436, 444, 473,
	474
weather (S: meteorology)	
wetlands .....	5, 38, 46, 182,
	183, 240, 241, 245,
	249, 251, 329, 375,
	378, 381, 432, 452,
	469
wind .....	29, 42, 66, 182,
(SA: model_wind)	189, 190, 217, 238,
	307, 313, 380, 462
zinc .....	16, 22, 111, 139,
	169, 170, 196, 216,
	315, 329, 333, 337,
	340, 357, 379, 380,
	381, 402, 440

AREA INDEX

Algoma Harbor, WI .....	28
Alpena, MI .....	424
Bailey's Harbor, WI .....	257
Bender County Park, WI .....	129
Benton Harbor, .....	348
Berrien County, MI .....	165
Black River, MI .....	24, 424
Broadman River, MI .....	24
Brown County, WI .....	423
Burns Harbor, IL .....	164
Burns Waterway, IL .....	28
Calumet Area, IL-IN .....	21, 337, 454
(SA: Calumet Harbor)	
(SA: Grand Calumet River)	
Calumet Harbor, IL .....	28, 164, 424
(SA: Calumet Area)	
Cedar River Harbor, MI .....	28
Central Lake Michigan .....	152, 229
Central Michigan Shoreline .....	20
(SA: specific state's shoreline)	
Charlevoix, MI .....	424
Charlevoix Harbor, MI .....	28
Chicago, IL .....	9, 10, 52, 53, 59, 61, 63, 118, 119, 124, 136, 141, 154, 164, 186 - 190, 193, 211, 215, 222, 239, 260, 262, 266, 301, 302, 317, 339, 350, 351, 405, 424, 471



Chicago Harbor, IL .....	28,	58,	72,	138,
	225			
D.C. Cook Nuclear Power Plant, MI .....	106			
Des Plaines River, IL-WI .....	173			
Detroit River, MI .....	84,	111,	326,	433
Door County, WI .....	57,	240		
Eastern Lake Michigan .....	464,	465		
(SA: specific state's shoreline)				
Escanaba River, MI .....	24			
Ford River, MI .....	24			
Fox Island, MI .....	385			
Fox Point, WI .....	78			
Fox River, WI .....	41,	56,	93,	100,
	158,	244,	332,	341,
	345,	367,	370,	447
Frankfort, MI .....	424			
Frankfort Harbor, MI .....	28,	202		
Galien River, MI .....	121			
Gary Harbor, IN .....	164			
Grand Calumet River, IN .....	31,	337,	454	
Grand Haven, MI .....	1,	87,	146,	218,
	348,	424,	448	
Grand Haven Harbor, MI .....	28,	419		
Grand River, MI .....	22,	24,	98,	365,
	476			
Grand Traverse Bay .....	43,	203,	308,	467
Great Lakes .....	6,	8,	11,	12,
(general on all Great Lakes	13,	15,	18,	33,
or not specify which of the	50,	55,	64,	68,
Great Lakes)	69,	80,	81,	88,
	89,	90,	96,	108,
	115,	125,	126,	133,
	134,	135,	137,	139,

Great Lakes (continued) .....	147, 176, 185, 195, 201, 208, 224, 226, 237, 254, 255, 256, 258, 285, 290, 292, 298, 299, 309, 311, 313 - 316, 327, 330, 333, 334, 343, 347, 352, 355, 359, 360, 361, 365, 384, 394, 398, 401, 412, 413, 414, 432, 437, 442, 444, 446, 450, 457, 471, 472, 475
Great Lakes Basin .....	39, 40, 79, 109, 127, 181, 182, 207, 275, 312, 324, 328, 329, 363, 364, 400, 404, 441, 445
Great Lakes Harbors (general) .....	145
(SA: specific harbors)	
Great Lakes Shoreline (general) .....	318
(SA: specific state's shoreline)	
Green Bay .....	41, 42, 56, 57, 74, 75, 100, 101, 102, 152, 153, 228, 229 - 233, 242, 243, 267, 332, 341, 342, 348, 362, 367, 370, 387, 423, 447, 460, 462, 463, 469
Green Bay Harbor, WI .....	244
Highland Park, IL .....	455
Holland, MI .....	424
Holland Harbor, MI .....	28, 418
Illinois .....	28, 52, 58, 72, 119, 123, 124, 138, 166, 168, 225, 234, 239, 260, 337, 339, 348, 350, 424
(SA: specific cities, rivers, or power plants)	
Illinois River, IL .....	173
Illinois Shoreline (SA: Illinois) .....	7, 9, 10, 21, 49, 53, 59, 63,

Illinois Shoreline (continued) .....	78, 104, 136, 141, 186 - 190, 193, 211, 215, 219, 222, 227, 262, 266, 302, 317, 399, 451, 455, 471
Illinois Waters .....	60, 61, 118, 154,
(SA: Illinois)	164, 171, 172, 173,
(SA: Southern Lake Michigan)	174, 192, 301, 305, 351, 405
Indiana .....	28, 31, 123, 167,
(SA: specific cities, rivers, or power plants)	168, 183, 234, 238, 337, 424, 454
Indiana Dunes National Lakeshore, IN .....	183, 245
Indiana Harbor, IN .....	28, 31, 164, 167, 424
Indiana Harbor Canal, IN .....	454
Indiana Shoals .....	238
Indiana Shoreline (SA: Indiana) .....	16, 144, 212, 219, 245, 261, 422, 453, 470
Indiana Waters .....	121, 164, 438
(SA: Indiana)	
(SA: Southern Lake Michigan)	
J.H. Campbell Generating Station, IL .....	464, 466
Jordan River, MI .....	24
Kalamazoo River, MI .....	24
Kenosha, WI .....	23, 151, 424
Kenosha County, WI .....	378
Kenosha Harbor, WI .....	28
Kewaunee, WI .....	424
Kewaunee Harbor, WI .....	28
Kinnickinnic River, WI .....	93, 374, 379, 380
Lake Erie .....	5, 17, 19, 24, 25, 28, 29, 45, 46, 48, 54, 65,

Lake Erie (continued) ..... 67, 70, 76, 83,  
 91, 97, 103, 111,  
 120, 121, 128, 131,  
 132, 143, 148, 149,  
 160, 175, 177 - 180,  
 184, 191, 194, 209,  
 217, 221, 223, 239,  
 247, 251, 252, 253,  
 262 - 265, 268 - 274,  
 291, 294, 295, 297,  
 313, 314, 319 - 323,  
 326, 331, 340, 342,  
 344, 346, 350, 354,  
 356, 386, 388, 389,  
 396, 397, 403, 406,  
 407, 415, 416, 424,  
 425, 427 - 431, 433,  
 434, 439, 440, 452,  
 473, 474, 476

Lake Forest, IL ..... 7, 192, 239

Lake Huron ..... 5, 17, 19, 22,  
 24, 25, 28, 29,  
 45, 46, 48, 52,  
 54, 65, 67, 70,  
 83, 84, 91, 97,  
 103, 113, 114, 120,  
 128, 130, 131, 132,  
 143, 148, 149, 160,  
 175, 177 - 180, 184,  
 191, 194, 209, 212,  
 217, 221, 223, 236,  
 247, 249, 251, 252,  
 253, 262 - 265, 268,  
 269 - 274, 288, 294,  
 295, 297, 313, 319,  
 320 - 323, 326, 331,  
 340, 342, 344, 346,  
 350, 354, 356, 358,  
 385, 386, 388, 389,  
 396, 397, 403, 406,  
 407, 415, 416, 424,  
 425, 427 - 431, 433,  
 434, 439, 440, 452,  
 473, 474, 476

Lake Michigan (includes all entries  
 except ones which are on Great Lakes  
 in general; if known for the publica-  
 tion, a more specific area is given,  
 i.e., Northern Lake Michigan, or  
 Eastern Lake Michigan, or Green Bay, etc.)

Lake Michigan Basin .....	277
(SA: Great Lakes Basin)	
Lake Michigan Shoreline .....	286, 459
(SA: specific state's shoreline)	
Lake Ontario .....	17, 19, 25, 28, 29, 45, 46, 48, 54, 65, 67, 70, 76, 83, 91, 97, 103, 128, 131, 132, 143, 148, 149, 160, 175, 177 - 180, 194, 209, 217, 223, 239, 247, 251, 262 - 265, 294, 295, 297, 319, 320 - 323, 326, 331, 340, 342, 344, 346, 350, 354, 356, 366, 386, 389, 396, 397, 403, 406, 407, 415, 424, 429, 430, 431, 433, 434, 439, 440, 473, 474
Lake St. Clair .....	46, 132, 149, 320, 321 - 323, 326, 424, 433
Lake Superior .....	5, 17, 24, 25, 26, 28, 29, 42, 45, 46, 48, 54, 65, 67, 70, 73, 76, 83, 86, 91, 97, 103, 128, 131, 132, 143, 148, 158, 159, 160, 175, 177, 178 - 180, 184, 191, 194, 197, 201, 209, 212, 217, 221, 223, 236, 247, 251, 262, 263 - 265, 268, 269, 270 - 274, 288, 294, 295, 297, 308, 319, 320 - 323, 326, 331, 340, 342, 344, 346, 350, 354, 356, 385, 386, 388, 389, 396, 397, 403, 406, 407, 415, 416, 424, 425, 426 - 431, 433, 434, 440, 443, 452, 467, 468, 473, 474

Leland Harbor, MI .....	28
Lincoln Park, IL .....	10, 215, 317, 405
Little Manistee River, MI .....	310
Little Menomonee River, WI .....	93
Loyola University, IL .....	186 - 190, 266
Ludington, MI .....	23, 424
Ludington Harbor, MI .....	28
Macatawa River, MI .....	24
Manistee, MI .....	424
Manistee Harbor, MI .....	28
Manistee River, MI .....	24
Manistique, MI .....	424
Manistique Harbor, MI .....	28
Manistique River, MI .....	24
Manitowoc, WI .....	23, 424
Manitowoc Harbor, WI .....	28
Menasha, WI .....	345
Menominee Harbor, WI .....	28
Menominee River, WI- WI .....	24, 41, 158
Menomonee River, WI .....	93, 365, 369, 379, 380
Michawye, MI .....	62
Michigan .....	1, 22, 28, 38, (SA: specific cities, rivers, or power plants) 62, 85, 87, 98, 106, 117, 123, 138, 146, 198, 199, 200, 218, 234, 239, 310, 335, 348, 365, 417, 418 - 421, 424, 448, 464 - 465, 476
Michigan City, IN .....	28, 424



Michigan Shoreline .....	5, 23, 32, 37, 82, 86, 107, 120, 165, 169, 170, 184, 202, 212, 219, 220, 221, 227, 268, 270, 272, 273, 274, 336, 392, 425, 427
(SA: Michigan)	
Michigan Waters .....	24, 439
(SA: Michigan)	
(SA: specific sections of Lake Michigan)	
Milwaukee, WI .....	93, 138, 210, 222, 230, 231, 239, 279, 287, 303, 345, 350, 424
Milwaukee County, WI .....	129, 278, 280, 289, 382, 383, 458
Milwaukee Harbor, WI .....	3, 30, 34, 281, 282 - 284, 299, 325, 379, 380, 408, 409
Milwaukee Reef .....	385
Milwaukee River, WI .....	93, 368, 372, 379, 380
Muskegon, MI .....	424
Muskegon County, MI .....	392
Muskegon Harbor, MI .....	28, 138, 420
Muskegon River, MI .....	24
Neenah, WI .....	345
New Buffalo, MI .....	335
New Buffalo Harbor, MI .....	28
Niagara River, NY .....	131, 320, 433
Northern Lake Michigan .....	42, 43, 56, 100, 203, 231, 232, 233, 244, 257, 267, 362, 367, 370, 423, 447, 460, 462, 463, 467, 469
Oconto Harbor, WI .....	28

Oconto River, WI .....	41, 158
Ozaukee County, WI .....	353, 381
Pensaukee River, WI .....	158
Pentwater Harbor, MI .....	28
Pentwater Marsh, MI .....	38
Peshtigo River, WI .....	41, 158
Petosky Harbor, MI .....	28
Point Beach Nuclear Power Plant, WI .....	345
Port Washington, WI .....	4, 410, 424
Port Washington Harbor, WI .....	27, 28, 112, 381
Portage Lake, MI .....	424
Portage Lake Harbor, MI .....	28
Porter County, IN .....	245
Racine, WI .....	23, 424, 477
Racine County, WI .....	300, 375, 376
Racine Harbor, WI .....	28
Root River, WI .....	93
Saugatuck Harbor, MI .....	28
Sheboygan, WI .....	23, 345, 424
Sheboygan Harbor, WI .....	28, 411
Shorewood, WI .....	150, 248, 276, 304
South Haven, MI .....	62, 117, 335, 336, 424
South Haven Harbor, MI .....	28, 417
Southeastern Lake Michigan .....	117, 218, 220, 250
Southern Lake Michigan .....	3, 7, 9, 10, 16, 21, 30, 31, 34, 37, 49, 53, 58 - 61, 63, 72,

Southern Lake Michigan (continued) .....	78, 103, 106, 118, 119, 121, 124, 136, 141, 144, 154, 163, 166, 167, 168, 171, 172 - 174, 183, 186, 187 - 190, 192, 193, 196, 198, 199, 204, 205, 206, 210, 211, 222, 225, 231, 245, 259, 260, 261, 266, 276, 278, 279, 281, 282 - 284, 287, 289, 302, 303, 305, 307, 317, 325, 336, 337, 339, 351, 357, 368, 369, 372, 373, 374, 378, 379, 380, 382, 383, 399, 405, 408, 409, 421, 422, 435, 438, 448, 449, 451, 453, 454, 455, 470
Southwestern Lake Michigan .....	238
St. Clair River .....	84, 320, 433
St. Joseph, MI .....	32, 198, 199, 335, 336, 424
St. Joseph County, MI .....	165
St. Joseph Harbor, MI .....	28, 421
St. Joseph River, MI .....	24, 121, 200
St. Lawrence River .....	17, 177, 179, 247, 254, 255, 256, 260, 320, 326, 350, 355, 363, 364, 431, 433, 442
St. Mary's River .....	320, 326, 433
Sturgeon Bay, WI .....	240, 241, 424
Sturgeon Bay Canal, WI .....	28
Sturgeon River, WI .....	24
Terry Andrae State Park, WI .....	94, 246
Trail Creek, IN .....	121

Tributaries (general) .....	24,	38,	73,	87,
(SA: specific rivers)	108,	158,	402,	423,
	440			
Two Rivers, WI .....	23,	424		
Two Rivers Harbor, WI .....	28			
Waukegan, IL .....	424			
Waukegan Harbor, IL .....	28,	166,	339,	348
Western Lake Michigan .....	246			
White Lake, MI .....	424			
White Lake Harbor, MI .....	28			
Whitefish Bay, WI .....	239			
Wilmette, IL .....	451			
Wilmette Reef .....	103			
Winnetka, IL .....	193			
Wisconsin .....	3,	4,	28,	34,
(SA: specific cities, rivers, or	41,	56,	85,	100,
power plants)	123,	138,	168,	210,
	231,	234,	239,	240,
	242,	244,	257,	276,
	281 - 284,	289,	299,	
	325,	332,	341,	350,
	365,	367,	368,	369,
	370,	372,	373,	379,
	380,	381,	408 - 411,	
	424,	447,	461	
Wisconsin Shoreline .....	23,	26,	27,	57,
(SA: Wisconsin)	92,	93,	94,	105,
	112,	129,	150,	151,
	162,	197,	219,	222,
	227,	246,	248,	278,
	279,	280,	300,	303,
	304,	338,	353,	371,
	375 - 378,	382,	383,	
	393,	423,	426,	443,
	456,	458,	460,	468,
	477			
Wisconsin Waters .....	30,	158,	159,	230,
(SA: Wisconsin; SA: Green Bay)	287,	345		
(SA: specific sections of Lake Michigan				

Wolf River, WI ..... 158, 461





