



30 X 60 MINUTE QUADRANGLE SHOWING

- Contours and elevations in meters
- Highways, roads and other manmade structures
- Water features
- Woodland areas
- Geographic names
- Bathymetric contours in meters



1978

Produced by the United States Geological Survey and National Ocean Service
 Contours from 1953 1:250 000-scale topographic maps dated 1943-1950
 Bathymetry added 1984
 Bathymetry compiled by the National Ocean Service from tide-coordinated hydrographic surveys. This information is not intended for navigational purposes.

Mean low water (dotted line) and mean high water (heavy solid) line compiled by NOS from tide-coordinated aerial photographs. Apparent shoreline (outer edge of vegetation) shown by light solid line.
 Projection and 10 000-meter grid, zone 16 Universal Transverse Mercator 25 000-foot grid scale based on Florida coordinate system, north zone 1927 North American Datum.
 To place on the practical North American Datum 1983 move the projection lines 21 meters south and 9 meters west.

Offshore protection survey data, shown in red, furnished by the Minerals Management Service. Heavy lines indicate limits of Outer Continental Shelf Official Protection Diagrams, dated June 2, 1983. The protection on this map are not for Federal liability purposes; for such purposes, refer to the 1:250 000-scale OCS Official Protection Diagrams available from the Minerals Management Service.

There may be private inholdings within the boundaries of the National or State reservations shown on this map.
 CONTOUR INTERVAL 5 METERS
 NATIONAL GEODETIC DATUM OF 1927 ELEVATIONS SHOWN TO THE NEAREST METER
 BATHYMETRIC CONTOURS INTERVAL 5 METERS WITH SUPPLEMENTARY 1 METER CONTOURS-DATUM IS MEAN LOWER LOW WATER
 THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE

BASE MAP COMPLES WITH NATIONAL MAP ACCURACY STANDARDS. BATHYMETRIC SURVEY DATA COMPLES WITH INTERNATIONAL HYDROGRAPHIC ORGANIZATION (IHO) SPECIAL PUBLICATION 44 ACCURACY STANDARDS AND/OR STANDARDS USED AS OF THE DATE OF THE SURVEY.

CONVERSION TABLE	DECLINATION DIAGRAM	ADJOINING MAPS
Meters to Feet	MAGNETIC DECLINATION	1 2 3
1 Meter = 3.2808 Feet	1978	4 5
1 Foot = 0.3048 Meter	1978	6 7 8
1 Nautical Mile = 1.852 Kilometers	1978	9 10 11
1 Kilometer = 0.621371 Miles	1978	12 13 14
1 Mile = 1.60934 Kilometers	1978	15 16 17
1 Nautical Mile = 1.852 Kilometers	1978	18 19 20
1 Kilometer = 0.621371 Miles	1978	21 22 23
1 Mile = 1.60934 Kilometers	1978	24 25 26
1 Nautical Mile = 1.852 Kilometers	1978	27 28 29
1 Kilometer = 0.621371 Miles	1978	30 31 32
1 Mile = 1.60934 Kilometers	1978	33 34 35
1 Nautical Mile = 1.852 Kilometers	1978	36 37 38
1 Kilometer = 0.621371 Miles	1978	39 40 41
1 Mile = 1.60934 Kilometers	1978	42 43 44
1 Nautical Mile = 1.852 Kilometers	1978	45 46 47
1 Kilometer = 0.621371 Miles	1978	48 49 50
1 Mile = 1.60934 Kilometers	1978	51 52 53
1 Nautical Mile = 1.852 Kilometers	1978	54 55 56
1 Kilometer = 0.621371 Miles	1978	57 58 59
1 Mile = 1.60934 Kilometers	1978	60 61 62
1 Nautical Mile = 1.852 Kilometers	1978	63 64 65
1 Kilometer = 0.621371 Miles	1978	66 67 68
1 Mile = 1.60934 Kilometers	1978	69 70 71
1 Nautical Mile = 1.852 Kilometers	1978	72 73 74
1 Kilometer = 0.621371 Miles	1978	75 76 77
1 Mile = 1.60934 Kilometers	1978	78 79 80
1 Nautical Mile = 1.852 Kilometers	1978	81 82 83
1 Kilometer = 0.621371 Miles	1978	84 85 86
1 Mile = 1.60934 Kilometers	1978	87 88 89
1 Nautical Mile = 1.852 Kilometers	1978	90 91 92
1 Kilometer = 0.621371 Miles	1978	93 94 95
1 Mile = 1.60934 Kilometers	1978	96 97 98
1 Nautical Mile = 1.852 Kilometers	1978	99 100 101
1 Kilometer = 0.621371 Miles	1978	102 103 104
1 Mile = 1.60934 Kilometers	1978	105 106 107
1 Nautical Mile = 1.852 Kilometers	1978	108 109 110
1 Kilometer = 0.621371 Miles	1978	111 112 113
1 Mile = 1.60934 Kilometers	1978	114 115 116
1 Nautical Mile = 1.852 Kilometers	1978	117 118 119
1 Kilometer = 0.621371 Miles	1978	120 121 122
1 Mile = 1.60934 Kilometers	1978	123 124 125
1 Nautical Mile = 1.852 Kilometers	1978	126 127 128
1 Kilometer = 0.621371 Miles	1978	129 130 131
1 Mile = 1.60934 Kilometers	1978	132 133 134
1 Nautical Mile = 1.852 Kilometers	1978	135 136 137
1 Kilometer = 0.621371 Miles	1978	138 139 140
1 Mile = 1.60934 Kilometers	1978	141 142 143
1 Nautical Mile = 1.852 Kilometers	1978	144 145 146
1 Kilometer = 0.621371 Miles	1978	147 148 149
1 Mile = 1.60934 Kilometers	1978	150 151 152
1 Nautical Mile = 1.852 Kilometers	1978	153 154 155
1 Kilometer = 0.621371 Miles	1978	156 157 158
1 Mile = 1.60934 Kilometers	1978	159 160 161
1 Nautical Mile = 1.852 Kilometers	1978	162 163 164
1 Kilometer = 0.621371 Miles	1978	165 166 167
1 Mile = 1.60934 Kilometers	1978	168 169 170
1 Nautical Mile = 1.852 Kilometers	1978	171 172 173
1 Kilometer = 0.621371 Miles	1978	174 175 176
1 Mile = 1.60934 Kilometers	1978	177 178 179
1 Nautical Mile = 1.852 Kilometers	1978	180 181 181
1 Kilometer = 0.621371 Miles	1978	182 183 184
1 Mile = 1.60934 Kilometers	1978	185 186 187
1 Nautical Mile = 1.852 Kilometers	1978	188 189 190
1 Kilometer = 0.621371 Miles	1978	191 192 193
1 Mile = 1.60934 Kilometers	1978	194 195 196
1 Nautical Mile = 1.852 Kilometers	1978	197 198 199
1 Kilometer = 0.621371 Miles	1978	200 201 202
1 Mile = 1.60934 Kilometers	1978	203 204 205
1 Nautical Mile = 1.852 Kilometers	1978	206 207 208
1 Kilometer = 0.621371 Miles	1978	209 210 211
1 Mile = 1.60934 Kilometers	1978	212 213 214
1 Nautical Mile = 1.852 Kilometers	1978	215 216 217
1 Kilometer = 0.621371 Miles	1978	218 219 220
1 Mile = 1.60934 Kilometers	1978	221 222 223
1 Nautical Mile = 1.852 Kilometers	1978	224 225 226
1 Kilometer = 0.621371 Miles	1978	227 228 229
1 Mile = 1.60934 Kilometers	1978	230 231 232
1 Nautical Mile = 1.852 Kilometers	1978	233 234 235
1 Kilometer = 0.621371 Miles	1978	236 237 238
1 Mile = 1.60934 Kilometers	1978	239 240 241
1 Nautical Mile = 1.852 Kilometers	1978	242 243 244
1 Kilometer = 0.621371 Miles	1978	245 246 247
1 Mile = 1.60934 Kilometers	1978	248 249 250
1 Nautical Mile = 1.852 Kilometers	1978	251 252 253
1 Kilometer = 0.621371 Miles	1978	254 255 256
1 Mile = 1.60934 Kilometers	1978	257 258 259
1 Nautical Mile = 1.852 Kilometers	1978	260 261 262
1 Kilometer = 0.621371 Miles	1978	263 264 265
1 Mile = 1.60934 Kilometers	1978	266 267 268
1 Nautical Mile = 1.852 Kilometers	1978	269 270 271
1 Kilometer = 0.621371 Miles	1978	272 273 274
1 Mile = 1.60934 Kilometers	1978	275 276 277
1 Nautical Mile = 1.852 Kilometers	1978	278 279 280
1 Kilometer = 0.621371 Miles	1978	281 282 283
1 Mile = 1.60934 Kilometers	1978	284 285 286
1 Nautical Mile = 1.852 Kilometers	1978	287 288 289
1 Kilometer = 0.621371 Miles	1978	290 291 292
1 Mile = 1.60934 Kilometers	1978	293 294 295
1 Nautical Mile = 1.852 Kilometers	1978	296 297 298
1 Kilometer = 0.621371 Miles	1978	299 300 301
1 Mile = 1.60934 Kilometers	1978	302 303 304
1 Nautical Mile = 1.852 Kilometers	1978	305 306 307
1 Kilometer = 0.621371 Miles	1978	308 309 310
1 Mile = 1.60934 Kilometers	1978	311 312 313
1 Nautical Mile = 1.852 Kilometers	1978	314 315 316
1 Kilometer = 0.621371 Miles	1978	317 318 319
1 Mile = 1.60934 Kilometers	1978	320 321 322
1 Nautical Mile = 1.852 Kilometers	1978	323 324 325
1 Kilometer = 0.621371 Miles	1978	326 327 328
1 Mile = 1.60934 Kilometers	1978	329 330 331
1 Nautical Mile = 1.852 Kilometers	1978	332 333 334
1 Kilometer = 0.621371 Miles	1978	335 336 337
1 Mile = 1.60934 Kilometers	1978	338 339 340
1 Nautical Mile = 1.852 Kilometers	1978	341 342 343
1 Kilometer = 0.621371 Miles	1978	344 345 346
1 Mile = 1.60934 Kilometers	1978	347 348 349
1 Nautical Mile = 1.852 Kilometers	1978	350 351 352
1 Kilometer = 0.621371 Miles	1978	353 354 355
1 Mile = 1.60934 Kilometers	1978	356 357 358
1 Nautical Mile = 1.852 Kilometers	1978	359 360 361
1 Kilometer = 0.621371 Miles	1978	362 363 364
1 Mile = 1.60934 Kilometers	1978	365 366 367
1 Nautical Mile = 1.852 Kilometers	1978	368 369 370
1 Kilometer = 0.621371 Miles	1978	371 372 373
1 Mile = 1.60934 Kilometers	1978	374 375 376
1 Nautical Mile = 1.852 Kilometers	1978	377 378 379
1 Kilometer = 0.621371 Miles	1978	380 381 382
1 Mile = 1.60934 Kilometers	1978	383 384 385
1 Nautical Mile = 1.852 Kilometers	1978	386 387 388
1 Kilometer = 0.621371 Miles	1978	389 390 391
1 Mile = 1.60934 Kilometers	1978	392 393 394
1 Nautical Mile = 1.852 Kilometers	1978	395 396 397
1 Kilometer = 0.621371 Miles	1978	398 399 400
1 Mile = 1.60934 Kilometers	1978	401 402 403
1 Nautical Mile = 1.852 Kilometers	1978	404 405 406
1 Kilometer = 0.621371 Miles	1978	407 408 409
1 Mile = 1.60934 Kilometers	1978	410 411 412
1 Nautical Mile = 1.852 Kilometers	1978	413 414 415
1 Kilometer = 0.621371 Miles	1978	416 417 418
1 Mile = 1.60934 Kilometers	1978	419 420 421
1 Nautical Mile = 1.852 Kilometers	1978	422 423 424
1 Kilometer = 0.621371 Miles	1978	425 426 427
1 Mile = 1.60934 Kilometers	1978	428 429 430
1 Nautical Mile = 1.852 Kilometers	1978	431 432 433
1 Kilometer = 0.621371 Miles	1978	434 435 436
1 Mile = 1.60934 Kilometers	1978	437 438 439
1 Nautical Mile = 1.852 Kilometers	1978	440 441 442
1 Kilometer = 0.621371 Miles	1978	443 444 445
1 Mile = 1.60934 Kilometers	1978	446 447 448
1 Nautical Mile = 1.852 Kilometers	1978	449 450 451
1 Kilometer = 0.621371 Miles	1978	452 453 454
1 Mile = 1.60934 Kilometers	1978	455 456 457
1 Nautical Mile = 1.852 Kilometers	1978	458 459 460
1 Kilometer = 0.621371 Miles	1978	461 462 463
1 Mile = 1.60934 Kilometers	1978	464 465 466
1 Nautical Mile = 1.852 Kilometers	1978	467 468 469
1 Kilometer = 0.621371 Miles	1978	470 471 472
1 Mile = 1.60934 Kilometers	1978	473 474 475
1 Nautical Mile = 1.852 Kilometers	1978	476 477 478
1 Kilometer = 0.621371 Miles	1978	479 480 481
1 Mile = 1.60934 Kilometers	1978	482 483 484
1 Nautical Mile = 1.852 Kilometers	1978	485 486 487
1 Kilometer = 0.621371 Miles	1978	488 489 490
1 Mile = 1.60934 Kilometers	1978	491 492 493
1 Nautical Mile = 1.852 Kilometers	1978	494 495 496
1 Kilometer = 0.621371 Miles	1978	497 498 499
1 Mile = 1.60934 Kilometers	1978	500 501 502

To convert meters to feet multiply by 3.2808
 To convert feet to meters multiply by 0.3048
 ITRM grid convergence (EN) and 1978 magnetic declination at center of map (Diagram 4) are approximate



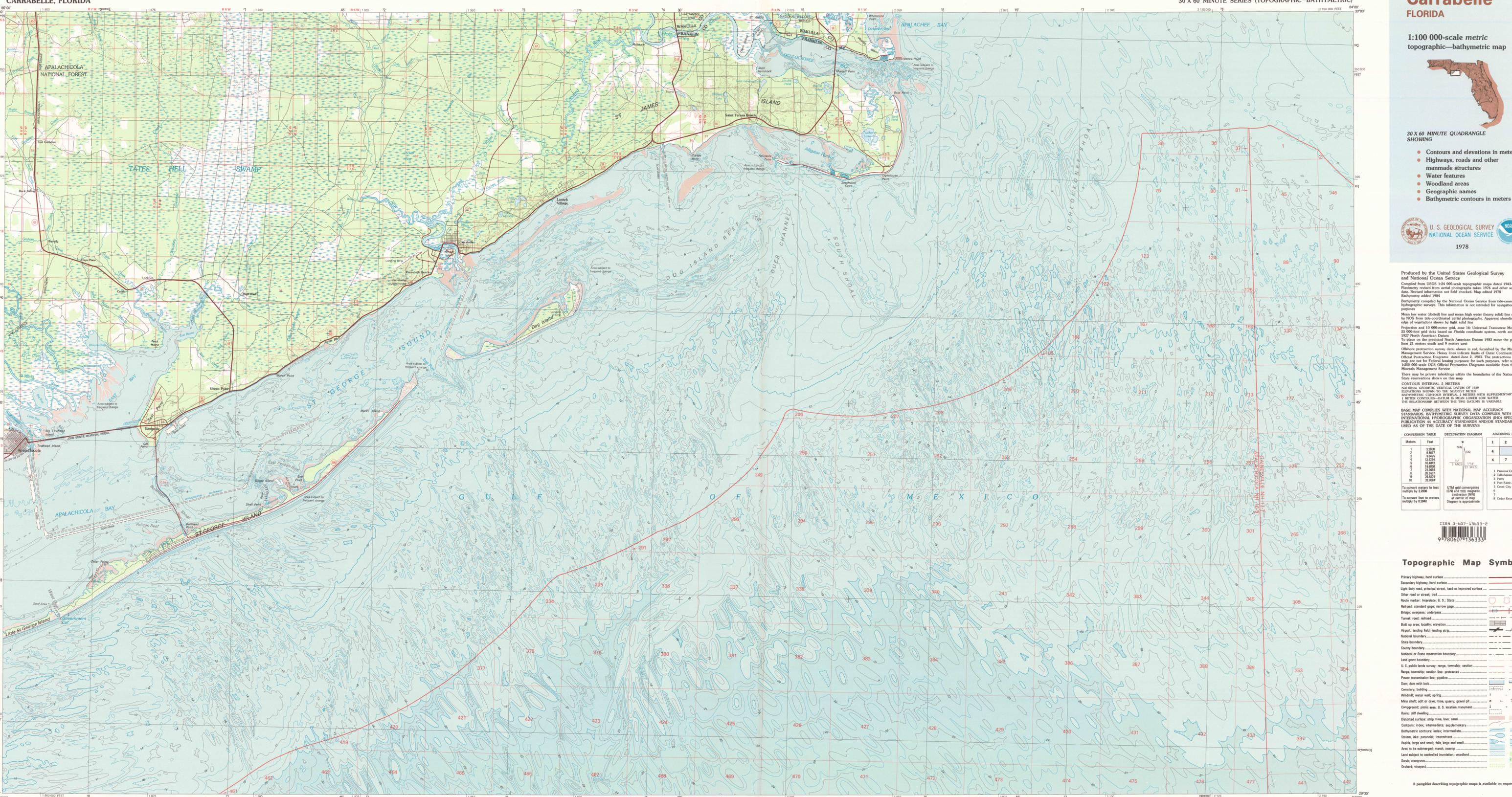
Topographic Map Symbols

- Primary highway, hard surface
- Secondary highway, hard surface
- Other road or street, trail
- Light duty road, principal street, hard or improved surface
- Road marker: Interstate, U. S. State
- Railroad: standard gauge, narrow gauge
- Bridge: overpass, underpass
- Tunnel: road, railroad
- Built up area, locality: elevation
- Airport: landing field, landing strip
- National boundary
- State boundary
- County boundary
- National or State reservation boundary
- Land grant boundary
- U. S. public lands survey: range, township, section
- Range, township, section line: projected
- Power transmission line: pipeline
- Dam, dam with lock
- Cemetery: building
- Wellhead; water well; spring
- Mine shaft; adit or cave; mine, quarry, gravel pit
- Campground; picnic area; U. S. station monument
- Ruin; cliff dwelling
- Discarded surface: strip mine, lava, sand
- Contours: index, intermediate, supplementary
- Bathymetric contours: index, intermediate
- Stream, lake: perennial, intermittent
- Rapids, large and small; falls, large and small
- Area to be submerged; marsh, swamp
- Land subject to controlled inundation; woodland
- Soak; mangrove
- Orchard; vineyard

A pamphlet describing topographic maps is available on request

FOR SALE BY U.S. GEOLOGICAL SURVEY P.O. BOX 32266, DENVER, COLORADO 80225

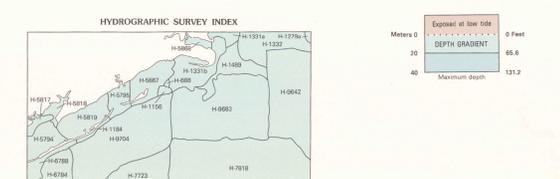
1978



RECEIVED
 APR 30 1999
 USGS/MD
 HISTORICAL MAP ARCHIVES

HYDROGRAPHIC SURVEY INFORMATION

SURVEY NUMBER	SURVEY DATE	SURVEY SCALE	SURVEY LINE SPACING (NAUT MILES)	SURVEY NUMBER	SURVEY DATE	SURVEY SCALE	SURVEY LINE SPACING (NAUT MILES)
H-688	1889	1:20,000	10-40	H-819	1935	1:20,000	20-16
H-1188	1877	1:20,000	10-50	H-867	1926	1:20,000	20-16
H-1274	1875	1:20,000	10-50	H-878	1942-43	1:40,000	10-30
H-2714	1876	1:20,000	10-50	H-879	1943	1:20,000	10-30
H-1316	1876	1:20,000	10-50	H-879	1943	1:20,000	10-30
H-1322	1876	1:20,000	10-50	H-1722	1947-48	1:40,000	10-30
H-1489	1881	1:20,000	10-50	H-818	1960	1:50,000	20-30
H-8174	1925	1:20,000	20-12	H-862	1976-77	1:40,000	20-16
H-679	1934-35	1:10,000	01-08	H-862	1977	1:40,000	20-16
H-818	1935	1:20,000	02-10	H-804	1977	1:40,000	20-16



Photographic copies of the above and other surveys may be obtained, at the cost of reproduction, by addressing the Director (NCO 243) National Ocean Service, National Oceanic and Atmospheric Administration, Rockville, Maryland 20850