

Table 1

Tidal Prism and Cross-Sectional Area Data

Inlet/Data Source	Spring or Diurnal Tidal Prism, P cu ft	MSL Area A sq ft	Hydraulic Radius R ft	W/R Ratio	Maximum Currents from NOS Tidal Current Tables fps	
					Flood	Ebb
<u>Atlantic Coast Inlets Without Jetties</u>						
1. Plum Island Sound, Mass. NOS Current Data, Oct 1953	1.32×10^9	3.98×10^4	17.6	128	2.70	2.53
2. Fire Island Inlet, N. Y. a. O'Brien (3) b. Cubature (NOS 1933)	2.18×10^9 1.86×10^9	3.56×10^4 4.01×10^4	14.7	195	4.05	4.05
3. Jones Inlet, N. Y. a. O'Brien (3) b. Cubature (NOS 1933) c. NOS Current Data, Jul 1933	1.50×10^9 1.04×10^9 1.02×10^9	2.89×10^4 2.04×10^4 2.04×10^4	15.4 15.4	86 86	5.24	4.39
4. Beach Haven Inlet (Little Egg Bay), N. J. Cubature (NOS 1936)	1.51×10^9	2.53×10^4	9.3	293		
5. Little Egg Inlet (Great Bay), N. J. a. Cubature (NOS 1935) b. L. J. Charlesworth (11)	1.72×10^9 (1.93×10^9)	3.83×10^4	13.3	216		
6. Brigantine Inlet, N. J. Cubature (NOS 1936)	5.23×10^8	1.22×10^4	19.2	33		
7. Absecon Inlet (before jetties), N. J. WES Model Report (12)	1.65×10^9	2.66×10^4	35.6	21		
8. Great Egg Harbor Entr., N. J. Cubature (NOS 1936-37)	2.00×10^9	7.01×10^4	12.3	460		
9. Townsend Inlet, N. J. Cubature (NOS 1937)	5.56×10^8	1.42×10^4	18.8	40		
10. Hereford Inlet, N. J. Cubature (NOS 1937)	1.19×10^9	3.57×10^4	12.0	246		
11. Chincoteague Inlet, Va. Cubature (NOS 1934)	1.56×10^9	4.44×10^4	7.9	712		
12. Oregon Inlet, N. C. Corps of Engrs, 1965 Flow Meas	3.98×10^9	6.66×10^4	13.5	367		
13. Ocracoke Inlet, N. C. Corps of Engrs, 1950 Flow Meas	5.22×10^9	9.68×10^4	13.8	435	2.87	4.05
14. Drum Inlet, N. C. Corps of Engrs, 1936 Flow Meas	5.82×10^8	7.70×10^3				
15. Beaufort Inlet, N. C. a. Corps of Engrs, 1935-36 Flow Meas b. Keulegan-Hall (13)	5.0×10^9 (5.1×10^9)	8.66×10^4	17.5	250	2.53	2.53
16. Carolina Beach Inlet, N. C. Corps of Engrs, 1967 Flow Meas	5.25×10^8	7.6×10^3	13.2	44		
17. Stono Inlet, S. C. NOS Current Data, May 1934	2.86×10^9	5.43×10^4	10.3	819	3.21	4.56
18. North Edisto River, S. C. O'Brien (3)	4.58×10^9	9.95×10^4			4.90	6.25
19. St. Helena Sound, S. C. Cubature (NOS 1934)	1.53×10^{10}	4.66×10^5	21.2	1040		
20. Port Royal Sound, S. C. Cubature (NOS 1934)	1.46×10^{10}	5.41×10^5	42.6	298	3.04	3.04
21. Calibogue Sound, S. C. Cubature (NOS 1934)	3.61×10^9	1.53×10^5	38.0	106	3.72	4.22
22. Wassaw Sound, Ga. NOS Current Data, 1934	8.2×10^9	2.64×10^5	17.9	824	2.87	3.72
23. Ossabaw Sound, Ga. Cubature (NOS 1934)	6.81×10^9	3.17×10^5	16.4	1180	2.70	3.21
24. Sapelo Sound, Ga. a. Cubature (NOS 1934) b. NOS Current Data, 1934	7.36×10^9 6.12×10^9	2.16×10^5 2.16×10^5	24.9 24.9	348 348	3.55	4.22

(Continued)

Note: Data in parentheses not used in analyses.

(Sheet 1 of 6)

Table 1 (Continued)

Inlet/Data Source	Spring or Diurnal Tidal Prism, P cu ft	MSL Area A sq ft	Hydraulic Radius R ft	W/R Ratio	Maximum Currents from NOS Tidal Current Tables fps	
					Flood	Ebb
<u>Atlantic Coast Inlets Without Jetties (Continued)</u>						
25. St. Catherines Sound, Ga.						
a. Cubature (NOS 1934)	6.94×10^9	2.39×10^5	31.2	246	3.21	3.55
b. NOS Current Data, 1934	8.3×10^9	2.39×10^5	31.2	246		
26. Doboy Sound, Ga.						
Cubature (NOS 1934)	4.04×10^9	9.91×10^4	23.7	177	3.38	3.38
27. Altamaha Sound, Ga.						
Cubature (NOS 1934)	2.91×10^9	9.23×10^4	8.4	1310	1.69	3.21
28. Hampton River, Ga.						
Cubature (NOS 1934)	1.01×10^9	4.11×10^4	22.7	80		
29. St. Simon Sound, Ga.						
a. Cubature (NOS 1934)	6.54×10^9	2.51×10^5	34.2	180	3.55	3.21
b. NOS Current Data, Mar 1934	1.35×10^{10}	2.51×10^5	34.2	180		
30. St. Andrew Sound, Ga.						
a. Cubature (NOS 1934-35)	9.86×10^9	3.85×10^5	27.0	528	3.55	3.72
b. NOS Current Data 1934	7.0×10^9	2.31×10^5				
31. Nassau Sound, Fla.						
Cubature (NOS 1934)	2.20×10^9	7.25×10^4	15.0	322	2.87	2.87
32. Ft. George Inlet, Fla.						
Cubature (NOS 1954)	3.11×10^8	8.6×10^3	6.0	239		
33. Old St. Augustine Inlet, Fla.						
Bruun and Gerritsen (14)	1.31×10^9	2.65×10^4				
34. Ponce de Leon, Fla. (before jetties)						
a. Cubature	5.74×10^8					
b. Corps of Engrs, G.D.M. (16)	6.19×10^8					
c. Bruun and Gerritsen (14)	5.65×10^8	1.15×10^4	12.8	70		
35. Delaware Bay Entrance						
O'Brien (3)	1.25×10^{11}	2.5×10^6			3.04	3.21
<u>Atlantic Coast Inlets with One Jetty</u>						
36. Fire Island Inlet, N. Y.						
Corps of Engrs, Aug 1965 Flow Meas	1.86×10^9	3.81×10^4	11.7	278		
37. East Rockaway Inlet, N. Y.						
a. O'Brien (3)	7.6×10^8	1.15×10^4			3.72	3.88
b. Cubature (NOS 1934)	4.86×10^8	1.18×10^4	16.6	43		
c. NOS Current Data, 1934	4.0×10^8	1.18×10^4	16.6	43		
38. Rockaway Inlet, N. Y.						
a. O'Brien (3)	3.7×10^9	8.6×10^4			3.04	4.56
b. NOS Current Data, Sep 1934	3.4×10^9	1.23×10^5	23.0	233		
39. Masonboro Inlet, N. C.						
Corps of Engrs, Sep 1969 Flow Meas	8.55×10^8	1.27×10^4	12.7	79		
40. St. Lucie Inlet, Fla.						
a. Cubature (NOS 1930)	5.94×10^8	1.76×10^4	9.2	208		
b. Corps of Engrs, Jacksonville Dist	5.66×10^8					
<u>Atlantic Coast Inlets with Two Jetties</u>						
41. Nantucket Inlet, Mass.						
Keulegan-Hall (13)	4.32×10^8	1.26×10^4	12.8	77	2.03	2.53
42. Shinnecock Inlet, N. Y.						
Cubature (CE Area)	2.19×10^8	5.5×10^3			4.22	3.88
43. Moriches Inlet, N. Y.						
a. O'Brien (3)	1.57×10^9	2.04×10^4				
b. Corps of Engrs, 1967-68 Flow Meas	8.46×10^8	1.32×10^4	14.4	64		
44. Shark River Inlet, N. J.						
Cubature	1.48×10^8	3.00×10^3	13.2	17		

(Continued)

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Table 1 (Continued)

Inlet/Data Source	Spring or	MSL Area A sq ft	Hydraulic Radius R ft	W/R Ratio	Maximum Currents from NOS Tidal Current Tables	
	Tidal Prism, P cu ft				fps Flood Ebb	
<u>Atlantic Coast Inlets with Two Jetties (Continued)</u>						
45. Manasquan Inlet, N. J. a. Cubature (NOS 1934) b. Keulegan-Hall (13)	1.75 × 10 ⁸ 1.745 × 10 ⁸	5.19 × 10 ³	12.3	34	2.87	3.04
46. Barnegat Inlet, N. J. a. Cubature (NOS 1936) b. Corps of Engrs, 1940-41 Flow Meas c. Corps of Engrs, 1943 Flow Meas d. Corps of Engrs, 1945 Flow Meas e. Corps of Engrs, 1968 Flow Meas	6.25 × 10 ⁸ 1.18 × 10 ⁸ 7.5 × 10 ⁸ 7.1 × 10 ⁸ 6.25 × 10 ⁸	1.48 × 10 ⁴ 1.62 × 10 ⁴ 1.09 × 10 ⁴ 1.34 × 10 ³ 9.25 × 10 ³	14.2	73	3.52	4.22
47. Absecon Inlet, N. J. O'Brien (3)	1.48 × 10 ⁹	3.13 × 10 ⁴				
48. Cold Springs Harbor (Cape May), N. J. a. NOS Current Data, 1947 b. Bruun, Gerritsen, and Morgan (15) c. Reynolds (17)	6.50 × 10 ⁸ 1.70 × 10 ⁸ 3.35 × 10 ⁸	1.29 × 10 ⁴ 4.60 × 10 ³ 1.16 × 10 ⁴	17.1 15.2	44 50	3.04	3.72
49. Indian River Inlet, Del. Keulegan (18)	5.25 × 10 ⁸	9.66 × 10 ³	12.0	67	3.04	3.55
50. Winyah Bay, S. C. Cubature (NOS 1935)	3.02 × 10 ⁹	7.86 × 10 ⁴	19.7	203	3.21	3.38
51. Charleston, S. C. O'Brien (3)	5.75 × 10 ⁹	1.44 × 10 ⁵			3.04	3.04
52. Savannah River (Tybee Roads), Ga. NOS Current Data, Apr-May 1934	3.1 × 10 ⁹	5.87 × 10 ⁴	24.2	100	2.7	4.39
53. St. Marys (Fernandina Harbor), Fla. a. Cubature (NOS 1937) b. Bruun, Gerritsen, and Morgan (15)	4.77 × 10 ⁹ 6.20 × 10 ⁹	1.44 × 10 ⁵ 1.50 × 10 ⁵	33.2	130	3.88	4.39
54. St. Johns River, Fla. a. Cubature (NOS 1958-59) b. Bruun, Gerritsen, and Morgan (15) c. Corps of Engrs, Jacksonville Dist	1.73 × 10 ⁹ 1.90 × 10 ⁹ 3.92 × 10 ⁹	5.73 × 10 ⁴ 3.60 × 10 ⁴	38.5	39	3.21	3.88
55. Fort Pierce Inlet, Fla. NOS Current Data, May 1930	5.81 × 10 ⁸	1.20 × 10 ⁴	13.6	65	4.39	5.24
56. Jupiter Inlet, Fla. a. Cubature (NOS 1967) b. Corps of Engrs, Jacksonville Dist	1.11 × 10 ⁸ 1.02 × 10 ⁸	2.91 × 10 ³	9.0	36		
57. Lake Worth Inlet, Fla. a. NOS Current Data, Apr 1929 b. Bruun, Gerritsen, and Morgan (15) c. Corps of Engrs, Jacksonville Dist	9.0 × 10 ⁸ 8.3 × 10 ⁸ 9.32 × 10 ⁸	9.5 × 10 ³ 1.52 × 10 ⁴	13.2	73	4.05	6.08
58. Port Everglades, Fla. NOS Current Data, Feb 1967	3.0 × 10 ⁸	2.1 × 10 ⁴	30.4	23	1.01	1.18
59. Bakers Haulover, Fla. Keulegan and Hall (13)	3.6 × 10 ⁸	4.38 × 10 ³	11.9	31	4.90	4.22
<u>Gulf Coast Inlets Without Jetties</u>						
60. Captiva Pass, Fla. NOS Current Data, Aug 1960	1.90 × 10 ⁹	2.87 × 10 ⁴	15.2	125	3.04	3.21
61. Boca Grande Pass, Fla. NOS Current Data, 1959	1.26 × 10 ¹⁰	1.66 × 10 ⁵	31.8	164	3.72	3.04
62. Gasparilla Pass, Fla. a. NOS Current Data, Nov 1958 b. Bruun and Gerritsen (14)	4.7 × 10 ⁸ 4.0 × 10 ⁸	1.33 × 10 ⁴ 1.05 × 10 ⁴	8.5	185	1.69	1.86
63. Stump Pass, Fla. Cubature (NOS 1955-56)	3.61 × 10 ⁸	5.90 × 10 ³	7.9	94		

(Continued)

(Sheet 3 of 6)

Table 1 (Continued)

Inlet/Data Source	Spring or Diurnal Tidal Prism, P cu ft	MSL Area A sq ft	Hydraulic Radius R ft	W/R Ratio	Maximum Currents from NOS Tidal Current Tables fps	
					Flood	Ebb
<u>Gulf Coast Inlets Without Jetties (Continued)</u>						
64. Midnight Pass, Fla. a. Cubature (NOS 1955) b. NOS Current Data, Mar 1955	2.61×10^8 2.84×10^8	3.22×10^3 3.22×10^3	7.0 7.0	66 66	3.04	2.36
65. Big Sarasota Pass, Fla. NOS Current Data, Mar-Apr 1955	7.6×10^8	2.31×10^4	12.3	153	2.53	1.69
66. New Pass, Fla. NOS Current Data, Sep 1953	4.00×10^8	6.37×10^3	11.4	49	2.70	1.69
67. Longboat Pass, Fla. a. NOS Current Data, Oct 1953 b. Bruun and Gerritsen (14)	4.90×10^8 7.77×10^8	1.14×10^4 1.13×10^4	14.5	54 59	3.04	2.70
68. Sarasota Pass, Fla. Cubature	8.10×10^8	1.99×10^4	4.2	1132		
69. Pass-a-Grille NOS Current Data, Apr 1950	1.42×10^9	3.5×10^4	17.7	112	2.03	2.36
70. Johns Pass, Fla. a. Cubature (NOS 1951-52) b. NOS Current Data, May 1949	5.03×10^8 4.96×10^8	8.86×10^3 8.42×10^3	14.9 13.3	40 47	3.38	2.53
71. Little (Clearwater) Pass, Fla. a. NOS Current Data, Jun 1951 b. Bruun, Gerritsen, and Morgan (15)	6.8×10^8 5.2×10^8	2.23×10^4 1.70×10^4	6.3	560	2.20	1.86
72. Big (Dunedin) Pass, Fla. a. NOS Current Data, Jun 1959 b. Bruun and Gerritsen (14)	3.76×10^8 3.18×10^8	1.44×10^4 6.0×10^3	7.8	237 191	1.69	1.69
73. East (Destin) Pass, Fla. a. Bruun and Gerritsen (14) b. Corps of Engrs, 1938 Flow Meas	1.62×10^9 1.57×10^9	1.38×10^4 1.72×10^4		191 141		
74. Pensacola Bay Entr., Fla. a. NOS Current Data, Apr 1940 b. Bruun, Gerritsen, and Morgan (15)	9.45×10^9 6.80×10^9	1.12×10^5 1.20×10^5	32.7	105	2.70	3.04
75. Perdido Pass, Ala. Corps of Engrs, 1963 Flow Meas	5.84×10^8	7.00×10^3				
76. Mobile Bay Entr., Ala. a. NOS Current Data, Jun 1935 b. Corps of Engrs, 1972 Flow Meas	2.0×10^{10} 3.4×10^{10}	3.15×10^5 3.14×10^5	18.3	940	2.36	2.53
77. Barataria Pass, La. NOS Current Data, 1947	2.55×10^9	6.93×10^4	31.7	69	2.53	2.20
78. Caminada Pass, La. NOS Current Data, 1933-34	6.34×10^8	1.26×10^4	7.4	232	2.53	2.53
79. Calcasieu Pass, La. Bruun and Gerritsen (14)	2.97×10^9	2.08×10^4		29	2.87	3.88
80. San Luis Pass, Tex. Cubature (NOS 1933-34)	5.84×10^8	3.20×10^4	7.4	584		
<u>Gulf Coast Inlets with Two Jetties</u>						
81. Venice Inlet, Fla. a. Cubature (NOS 1955) b. NOS Current Data, May 1955 c. Corps of Engrs, Jacksonville Dist	8.5×10^7 7.4×10^7 9.41×10^7	2.36×10^3 2.36×10^3	9.1 9.1	29 29	1.86	1.52
82. Galveston Entr., Tex. a. O'Brien (3) including San Luis Pass b. Cubature (NOS 1934)	1.59×10^{10} 5.94×10^9	2.2×10^5 1.97×10^5			2.87	3.88
83. Aransas Pass, Tex. a. Bruun and Gerritsen (14) b. Reynolds (17)	1.76×10^9 6.66×10^9	1.6×10^4 2.73×10^4			1.52	2.03

(Continued)

(Sheet 4 of 6)

Table 1 (Continued)

Inlet/Data Source	Spring or Diurnal Tidal Prism, P cu ft	MSL Area A sq ft	Hydraulic Radius R ft	W/R Ratio	Maximum Currents from NOS Tidal Current Tables fps	
					Flood	Ebb
<u>Pacific Coast Inlets Without Jetties</u>						
84. Willapa Bay, Wash.					4.22	4.22
a. O'Brien (3)	2.50×10^{10}	3.94×10^5				
b. Johnson (6)	1.73×10^{10}	4.95×10^5	19.5	1303		
85. Siletz Bay, Oreg.						
Oregon St Univ (19)	3.5×10^8	3.4×10^3				
86. Alsea Bay, Oreg.						
Oregon St Univ (19)	5.0×10^8	8.0×10^3				
87. Tomales Bay, Calif.						
a. O'Brien (3)	1.58×10^9	3.6×10^4				
b. Johnson (6)	1.49×10^9	2.12×10^4	16.0	83		
88. Bolinas Lagoon, Calif.						
Johnson (6)	1.31×10^8	1.3×10^3	6.6	30		
89. San Francisco, Calif.					4.05	4.39
a. O'Brien (3)	5.1×10^{10}	9.38×10^5				
b. Johnson (6)	5.1×10^{10}	9.31×10^5	177	30		
90. Newport Bay, Calif. (before jetties)						
Reynolds (17)	3.77×10^8	3.7×10^3				
91. Punta Banda						
O'Brien (3)	2.99×10^8	5.46×10^3				
<u>Pacific Coast Inlets with One Jetty</u>						
92. Tillamook Bay, Oreg.					5.07	4.39
a. O'Brien (3)	2.11×10^9	3.69×10^4				
b. Johnson (6)	2.15×10^9	1.57×10^4	10.6	140		
c. Comm Tidal Hyd (20)	2.49×10^9	2.70×10^4				
93. San Diego Bay, Calif.					2.03	2.53
a. O'Brien (3)	3.38×10^9	6.17×10^4				
b. Johnson (6)	2.52×10^9	7.12×10^4	38.0	48		
<u>Pacific Coast Inlets with Two Jetties</u>						
94. Grays Harbor, Wash.					3.21	4.73
a. O'Brien (3)	2.43×10^{10}	2.85×10^5				
b. Johnson (6)	1.70×10^{10}	2.91×10^5	43	158		
c. Bruun and Gerritsen (14)	1.84×10^{10}	3.36×10^5				
95. Columbia River, Oreg., Wash.					6.08	7.09
a. O'Brien (3)	3.82×10^{10}	5.08×10^5				
b. Johnson (6)	3.87×10^{10}	4.43×10^5	37.5	315		
96. Nehalem River, Oreg.						
a. O'Brien (3)	6.0×10^8	1.12×10^4				
b. Johnson (6)	5.66×10^8	9.64×10^3	17.5	31		
97. Yaquina Bay, Oreg.					4.05	3.88
a. O'Brien (3)	7.73×10^8	1.98×10^4				
b. Johnson (6)	1.12×10^9	1.96×10^4	19.6	51		
c. Oregon St Univ (19)	1.12×10^9	2.20×10^4				
98. Siuslaw River, Oreg.					1.52	1.86
a. O'Brien (3)	4.64×10^8	1.10×10^4				
b. Johnson (6)	3.66×10^8	8.33×10^4	11.2	67		
c. Comm Tidal Hyd (20)	4.82×10^8					
99. Umpqua River, Oreg.					1.35	1.69
a. O'Brien (3)	2.20×10^9	4.62×10^4				
b. Johnson (6)	1.59×10^9	3.3×10^4	16.7	119		
c. Comm Tidal Hyd (20)	2.20×10^9	3.8×10^4				
100. Coos Bay, Oreg.					3.04	3.72
a. O'Brien (3)	2.84×10^9	6.11×10^4				
b. Johnson (6)	2.51×10^9	5.65×10^4	27.4	75		
c. Comm Tidal Hyd (20)	2.51×10^9	5.40×10^4				

(Continued)

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Table 1 (Concluded)

Inlet/Data Source	Spring or	MSL Area A sq ft	Hydraulic	W/R Ratio	Maximum Currents from NOS Tidal Current Tables	
	Diurnal Tidal Prism, P cu ft		Radius R ft		fps	
					Flood	Ebb
<u>Pacific Coast Inlets with Two Jetties (Continued)</u>						
101. Coquille River, Oreg.					2.36	2.03
a. O'Brien (3)	3.89×10^8	9.02×10^3				
b. Johnson (6)	1.77×10^8	7.03×10^3	11.3	55		
c. Comm Tidal Hyd (20)	(3.89×10^8)					
102. Rogue River, Oreg.					2.02	2.02
Comm Tidal Hyd (20)	1.51×10^8	4.5×10^3				
103. Humboldt Bay, Calif.					2.70	3.38
a. O'Brien (3)	4.38×10^9	7.55×10^4				
b. Johnson (6)	3.51×10^9	5.19×10^4	23.6	93		
104. Bodega Bay, Calif.						
Johnson (6)	1.49×10^8	5.12×10^3	16.4	19		
105. Moss Landing, Calif.						
Johnson (6)	1.41×10^8	4.12×10^3	10.7	36		
106. Newport Bay, Calif.						
a. O'Brien (3)	1.09×10^8	5.98×10^3				
b. Reynolds (17)	3.31×10^8	1.0×10^4				
107. Camp Pendleton, Calif.						
O'Brien (3)	1.14×10^7	4.64×10^2				
108. Mission Bay, Calif.						
a. O'Brien (3)	4.2×10^8	1.04×10^4				
b. Johnson (6)	4.7×10^8	1.59×10^3	15.9	63		
c. Bruun and Gerritsen (14)	4.24×10^8	8.5×10^3		236		