

US Army Corps of Engineers
 San Francisco District
 1455 Market Street
 San Francisco, CA 94103

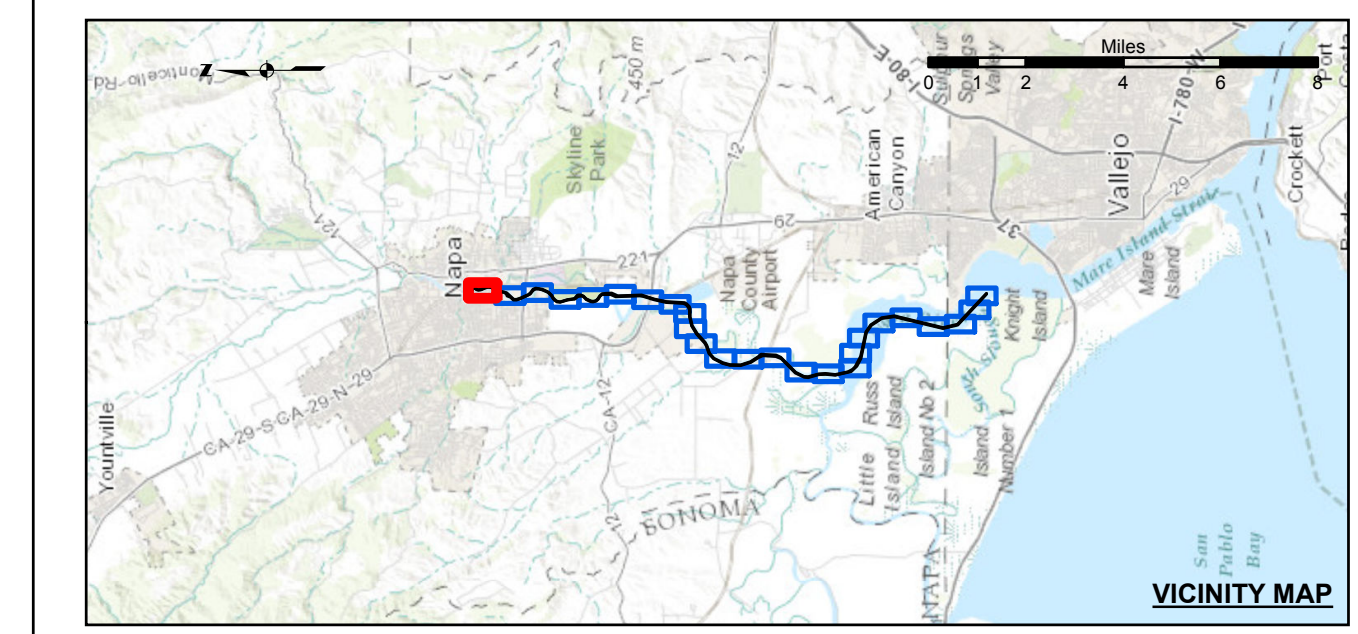
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NAD 83 CHANNEL ANGLE POINTS											
Δ PT	X	Y	Δ PT	X	Y	Δ PT	X	Y	Δ PT	X	Y
1	6049873.57	2300464.64	47	6048520.47	2285146.44	83	6046206.27	2255227.24	139	6049190.67	2287801.84
2	6050024.67	2299856.64	48	6049530.77	2284491.14	84	6045574.57	2256380.54	140	6049243.67	2287705.64
3	6050231.27	2299620.34	49	6049226.77	2283941.84	85	6044820.57	2256914.24	141	6049210.67	2288166.34
4	6050305.17	2299201.14	50	6048266.97	2281248.54	86	6041981.27	2257566.34	142	6049322.87	2288165.44
5	6050350.27	2299393.74	51	6048202.67	2279884.34	87	6041162.17	2258023.54	143	6048831.47	2289301.14
6	6050326.57	2299292.84	52	6048508.67	2278592.34	88	6040567.87	2258659.04	144	6048602.27	2290109.14
7	6050223.27	2299176.84	53	6048361.87	2277686.34	89	6040216.47	2259379.94	145	6048861.67	2290447.34
8	6050162.57	2299074.94	54	6048224.67	2276357.34	90	6040339.47	2261458.04	146	6048756.57	2290621.34
9	6050130.67	2298957.84	55	6047934.67	2275096.34	91	6040309.17	2262182.24	147	6048887.57	2290758.24
10	6050155.87	2298904.34	56	6047695.87	2273990.34	92	6040008.17	2263335.04	148	6049021.67	2290822.84
11	6050374.67	2298200.34	57	6048162.67	2273013.34	93	6040056.67	2263787.24	149	6049362.87	2291081.64
12	6050438.67	2297901.34	58	6048587.67	2272506.34	94	6040355.87	2264731.14	150	6049682.67	2291392.64
13	6050402.87	2297791.34	59	6048474.67	2272322.34	95	6040392.17	2265208.54	151	6049759.87	2291553.64
14	6049965.67	2298886.34	60	6044027.67	2274440.34	96	6042363.87	2266814.04	152	6049888.27	2292043.64
15	6049852.97	2298190.84	61	6043887.67	2274244.34	97	6042461.77	2266207.44	153	6050071.17	2292414.14
16	6049747.87	2297976.34	62	6043927.67	2273781.34	98	6042771.07	2265896.74	154	6050078.87	2292731.34
17	6049027.67	2295116.54	63	6042289.67	2273516.34	99	6041765.47	2265801.04	155	6049997.67	2292840.34
18	6049027.67	2294825.54	64	6041777.87	2272546.34	100	6041425.07	2265026.74	156	6049759.87	2293176.34
19	6049130.67	2294461.94	65	6041569.67	2271791.34	101	6041470.17	2264716.34	157	6049616.67	2293261.34
20	6049335.47	2293521.84	66	6041526.67	2271040.34	102	6041684.17	2263834.44	158	6049492.27	2293419.84
21	6049767.87	2293266.34	67	6041655.57	2270548.54	103	6042209.87	2263061.14	159	6049309.87	2293470.34
22	6050098.67	2293038.34	68	6042372.87	2269724.04	104	6042778.37	2262406.64	160	6048937.67	2293481.34
23	6050217.67	2292725.34	69	6042635.67	2268399.34	105	6043647.07	2261336.34	161	6048937.67	2293581.34
24	6050559.67	2292192.14	70	6043521.47	2267754.44	106	6043968.57	2261421.14	162	6049236.17	2293498.34
25	6049827.47	2291521.44	71	6042293.47	2266266.44	107	6044915.47	2260352.54	163	6049392.27	2293587.04
26	6049743.97	2291348.14	72	6042617.87	2264671.34	108	6045821.07	2259000.74	164	6049695.67	2293911.34
27	6049406.27	2291022.14	73	6043160.87	2263171.04	109	6046908.77	2257611.54	165	6049778.87	2294201.34
28	6049065.77	2290811.74	74	6043114.97	2262317.64	110	6047548.97	2256101.64	166	6049874.47	2294381.64
29	6049399.07	2290703.64	75	6044008.67	2262196.34	111	6047853.87	2254225.44	167	6050330.17	2294761.74
30	6049811.87	2290576.74	76	6044330.87	2261455.34	112	6048114.07	2252499.54	168	6050363.87	2294997.74
31	6049833.37	2290422.44	77	6045031.67	2260384.34	113	6048226.67	2250826.34	169	6050302.97	2295176.94
32	6049679.07	2290113.14	78	6046001.67	2258993.34	114	6048270.57	2249334.64	170	6050082.17	2295675.14
33	6049895.17	2289816.14	79	6046860.67	2258492.34	115	6048409.57	2247807.84	171	6050063.87	2296201.34
34	6049882.87	2289687.44	80	6047115.47	2258219.34	116	6048724.37	2246191.74	172	6050093.27	2296105.54
35	6049679.07	2289313.14	81	6048001.67	2257612.54	117	6049106.27	2244617.74	173	6050166.77	2296221.54
36	6049320.77	2288975.54	82	6048792.67	2257005.84	118	6049165.47	2243143.74	174	6050237.67	2296327.54
37	6049392.67	2288149.34	83	6048649.57	2256449.54	119	6049122.77	2241692.54	175	6050272.17	2296389.34
38	6049394.67	2287786.34	84	6049392.27	2255824.24	120	6049384.97	2240313.94	176	6050237.67	2296486.04
39	6049251.87	2287556.34	85	6049565.17	2255282.84	121	6049371.87	2238924.34	177	6050172.17	2296582.84
40	6049491.67	2287266.34	86	6049207.47	2254599.84	122	6049230.87	2237537.34	178	6049967.47	2296807.84
41	6049702.87	2286971.34	87	6048556.47	2253742.94	123	6048975.07	2236169.14	179	6049809.17	2297007.14
42	6049675.67	2286525.34	88	6048864.47	2252853.94	124	6048667.47	2234804.44			
43	6049736.67	2286239.34	89	6048776.47	2252480.14	125	6048599.77	2233421.44			
44	6049924.87	2285928.34	90	6048465.77	2251690.64	126	6048465.57	2232032.74			
45	6049286.67	2285788.34	91	6048104.57	2250861.44	127	6048979.77	2230644.14			
46	6049459.67	2285526.34	92	6048463.57	2250889.24	128	6048886.47	2229251.64			

NAD 83 CENTERLINE ANGLE POINTS					
Δ PT	X	Y	Δ PT	X	Y
1	6049841.27	2300026.94	49	6049415.67	2285525.34
2	6049996.07	2299832.24	50	6049450.57	2285335.44
3	6050201.77	2299606.14	51	6049447.87	2284552.54
4	6050271.37	2299503.04	52	6049174.77	2283987.14
5	6050311.17	2299391.54	53	6049217.17	2283556.14
6	6050292.17	2299310.24	54	6049197.67	2283161.14
7	6050197.07	2299199.14	55	6048772.57	2282868.04
8	6050127.97	2299090.24	56	6048459.07	2282600.14
9	6050092.67	2298961.04	57	6048320.67	2282370.44
10	6050118.97	2298894.14	58	6048294.17	2282104.44
11	6050338.87	2298818.64	59	6048169.37	2281848.04
12	6050401.67	2298789.54	60	6047894.27	2281608.84
13	6050367.67	2298703.34	61	6047622.37	2281368.84
14	6049910.47	2298568.44	62	6046811.77	2281063.44
15	6049815.77	2298196.14	63	6045839.37	2280533.54
16	6049676.67	2298083.84	64	6044945.07	2280032.84
17	6049882.67	2295148.04	65	6043988.17	22794481.04
18	6049882.67	2294284.64	66	6043667.37	2279203.64
19	6049095.27	2294466.14	67	6042802.97	2279015.64
20	6049513.87	2293470.84	68	6042249.97	2278548.24
21	6049687.17	2293268.64	69	6041519.97	2278199.04
22	6049758.67	2293221.34	70	6041475.37	2278033.54
23	6050063.87	2292989.34	71	6041810.47	2278525.34
24	6050148.17	2292728.04	72	6042321.97	2278870.44
25	6050106.67	2292401.94	73	6042548.77	2278830.34
26	6050023.87	2292321.54	74	6042442.67	2278692.34
27	6049793.57	2291937.54	75	6042192.87	2278237.54
28	6049713.07	2291370.44	76	6040576.77	2274701.24
29	6049386.07	2291051.84	77	6041088.87	2273719.14
30	6049043.67	2290642.14	78	6040065.17	2273326.34
31	6048491.37	2290730.94	79	6040358.97	2272189.24
32	6048787.07	2290599.04	80	6040389.57	2271457.14
33	6048987.87	229034.84	81	6040281.07	2270382.14
34	6048640.67	2290111.14	82	6040584.77	2269826.14
35	6048688.27	2289308.54	83	6040714.27	2269575.64
36	6048944.07	2288695.24	84	6041138.77	2269117.14
37	6048961.77	2288529.24	85	6042103.77	2267586.34
38	6048265.67	2288221.44	86	6044851.27	2266900.04
39	6049201.67	2288140.84	87	6045612.07	2266415.04
40	6049313.67	2287847.84	88	6046343.47	2265244.34
41	6049319.17	2287770.94	89	6046514.37	2264386.04
42	6049221.17	2287579.24	90	6045155.97	2264800.54
43	6048913.67	2287282.24	91	6045511.07	2264101.64
44	6048666.17	2286782.04	92	6048818.87	2243829.54
45	6048637.77	2286523.44			
46	6048702.07	2286224.34			
47	6048999.87	2285997.74			
48	6049258.67	2285762.84			



- Federal Navigation Channel
- Shoaling Area
- Placement Area
- Anchorage Area
- Wreck Area
- Submerged Wreck
- Angle Point
- Beacon, General
- Obstruction Point
- Navigation Buoy
- Navigation Buoy
- Shoalest Sounding*
- 10
- 9
- 8
- 7
- 6

NOTES:
 HORIZONTAL COORDINATE SYSTEM:
 NORTH AMERICAN DATUM OF 1983 (NAD83), PROJECTED TO THE STATE PLANE COORDINATE SYSTEM (SPCS), CALIFORNIA ZONE II. DISTANCE UNITS IN U.S. SURVEY FEET.
 VERTICAL DATUM:
 SOUNDINGS ARE SHOWN IN FEET AND INDICATE DEPTHS BELOW MEAN LOWER LOW WATER.
 THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY CONDUCTED ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED TO REPRESENT THE GENERAL CONDITION EXISTING AT THAT TIME.
 PLANE GRID, BEARING AND COORDINATES ARE BASED ON THE STATE OF CALIFORNIA COORDINATE SYSTEM.
 LAMBERT CONFORMAL PROJECTION, ZONE II NAD 83.
 CALIFORNIA, AS DESCRIBED IN SPECIAL PUBLICATION NO. 235, PUBLISHED BY NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE.
 BASE MAPS ARE USDA NAIP 2010.
 *SHOALEST SOUNDING PER QUARTER PER REACH

DRAWING NOT TO BE USED FOR NAVIGATION. ONLY CHANNEL CONDITION AT DATE OF SURVEY.
 THE LOCATION OF ALL NAVIGATION AIDS ARE BASED ON INFORMATION PROVIDED BY THE U.S. COAST GUARD. BUOY LOCATIONS REPRESENT THE POSITION OF THE SINKER ONLY. SOUNDINGS FOR THE OUTSIDE CHANNEL (100 FT. WIDE) TAKEN BY FATHOMETER, THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LE