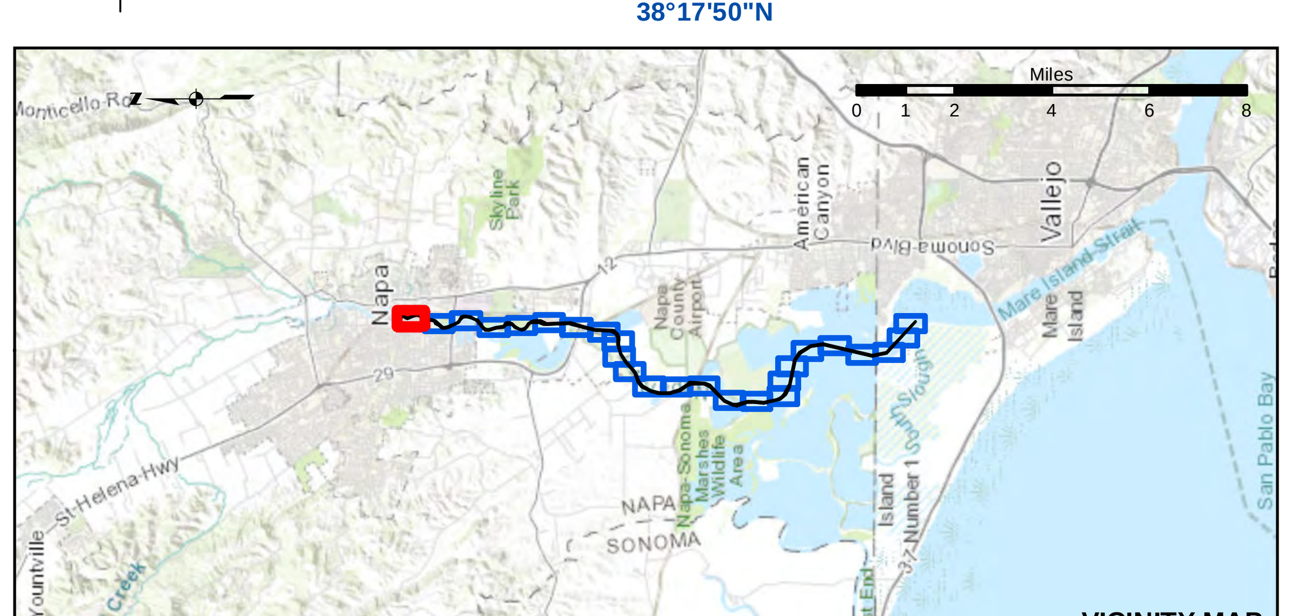
NAD 83
CHANNEL ANGLE POINTS

∠ PT	X	Y	∠ PT	X	Y	∠ PT	X	Y	∠ PT	X	Y
1	6049873.57	2300046.64	47	6049529.47	2285146.44	93	6046295.27	2255227.24	139	6049190.67	2287601.84
2	6050024.67	2299856.64	48	6049530.77	2284491.14	94	6045574.57	2256380.54	140	6049243.67	2287705.64
3	6050231.27	2299629.34	49	6049226.77	2283841.84	95	6044829.57	2256914.24	141	6049210.67	2288166.34
4	6050305.17	2299520.14	50	6049268.97	2281248.54	96	6041981.27	2257566.34	142	6048922.87	2288516.44
5	6050350.27	2299393.74	51	6048820.67	2279884.34	97	6041162.17	2258023.54	143	6048831.47	2289301.14
6	6050326.57	2299292.84	52	6048508.67	2278592.34	98	6040567.87	2258659.04	144	6048602.27	2290109.14
7	6050227.27	2299176.84	53	6048361.67	2276586.34	99	6040216.47	2260379.94	145	6048661.57	2290447.34
8	6050162.57	2299074.94	54	6048224.67	2276357.34	100	6040339.47	2261458.94	146	6048756.57	2290621.34
9	6050130.67	2298957.84	55	6047934.67	2276096.34	101	6040309.17	2262182.24	147	6048887.57	2290758.24
10	6050155.67	2298694.34	56	6047695.67	2275999.34	102	6040008.17	2263335.04	148	6049021.57	2290872.64
11	6050374.67	2298200.34	57	6046816.67	2276013.34	103	6040056.67	2263787.24	149	6049362.87	2291081.64
12	6050439.67	2297901.34	58	6045857.67	2275806.34	104	6040535.87	2264731.14	150	6049682.17	2291392.64
13	6050402.67	2297591.34	59	6044974.67	2275292.34	105	6042092.17	2266208.54	151	6049759.67	2291553.54
14	6049965.67	2296886.34	60	6044027.67	2274440.34	106	6042363.87	2266814.94	152	6049988.27	2292043.64
15	6049852.97	2296190.84	61	6043687.67	2274244.34	107	6042461.77	2268207.44	153	6050071.17	2292414.14
16	6049747.67	2295876.34	62	6042827.67	2273971.34	108	6042271.07	2268696.74	154	6050078.67	2292731.34
17	6049027.67	2295116.54	63	6042289.67	2273516.34	109	6041765.47	2269501.94	155	6049997.67	2292940.34
18	6049027.67	2294825.54	64	6041777.67	2272546.34	110	6041425.07	2270626.74	156	6049759.67	2293176.34
19	6049130.67	2294461.94	65	6041569.67	2271791.34	111	6041470.17	2271806.74	157	6049616.67	2293271.34
20	6049535.47	2293521.84	66	6041525.67	2270640.34	112	6041684.17	2272583.44	158	6049492.27	2293419.84
21	6049757.67	2293266.34	67	6041855.57	2269548.54	113	6042209.87	2273580.14	159	6049039.97	2294470.34
22	6050093.67	2293038.34	68	6042372.87	2268724.04	114	6042778.37	2274060.64	160	6048937.67	2294831.34
23	6050217.67	2292725.34	69	6042635.67	2268399.34	115	6043647.07	2274336.34	161	6048937.67	2295181.34
24	6050059.67	2292019.34	70	6042521.47	2266775.44	116	6043968.57	2274521.74	162	6049236.17	2295496.34
25	6049827.47	2291521.44	71	6042293.47	2266266.44	117	6044915.47	2275373.54	163	6049392.27	2295857.94
26	6049743.97	2291348.14	72	6040617.67	2264671.34	118	6045821.07	2275900.74	164	6049605.67	2295911.34
27	6049409.27	2291022.14	73	6040160.57	2263771.04	119	6046806.77	2276113.54	165	6049778.67	2296201.34
28	6049065.77	2290811.74	74	6040114.97	2263317.64	120	6047548.97	2276101.64	166	6049874.47	2296881.54
29	6048939.07	2290703.64	75	6040408.67	2262196.34	121	6047853.87	2276225.44	167	6050330.17	2297616.74
30	6048817.67	2290576.74	76	6040439.67	2261455.34	122	6048114.07	2276459.54	168	6050363.67	2297897.74
31	6048733.37	2290422.44	77	6040317.67	2260384.34	123	6048226.67	2276626.34	169	6050302.97	2298176.94
32	6048679.07	2290113.14	78	6040601.67	2258993.34	124	6048279.57	2276834.64	170	6050082.17	2298675.14
33	6048905.17	2289316.14	79	6040860.67	2258492.34	125	6048409.57	2278607.84	171	6050054.67	2298964.34
34	6048982.87	2288687.44	80	6041115.47	2258219.34	126	6048724.37	2279911.74	172	6050093.27	2299105.54
35	6049000.67	2288543.54	81	6042227.87	2257612.54	127	6049106.27	2281073.74	173	6050166.77	2299221.54
36	6049320.77	2288276.54	82	6044872.97	2257005.84	128	6049165.47	2281463.74	174	6050257.77	2299327.74
37	6049392.67	2288149.34	83	6045649.57	2256449.54	129	6049122.77	2284092.54	175	6050272.17	2299389.34
38	6049394.67	2287836.34	84	6046392.27	2255264.24	130	6049364.97	2284613.94	176	6050237.67	2299486.04
39	6049251.67	2287556.34	85	6046565.17	2253882.84	131	6049371.67	2285524.34	177	6050172.17	2299582.84
40	6048947.67	2287266.34	86	6045207.47	2248599.84	132	6049230.67	2285737.34	178	6049967.47	2299807.94
41	6048702.67	2286771.34	87	6045556.47	2247042.94	133	6048875.07	2285969.14	179	6049809.17	2300007.14
42	6048675.67	2286525.34	88	6048864.47	2243853.94	134	6048667.47	2286204.44			
43	6048736.67	2286239.34	89	6048776.47	2243801.94	135	6048599.77	2286521.54			
44	6048924.67	2286026.34	90	6045465.77	2246990.64	136	6048629.57	2286792.74			
45	6049286.67	2285788.34	91	6045104.57	2248601.44	137	6048879.77	2287298.14			
46	6049459.67	2285526.34	92	6046463.57	2253889.24	138	6048886.47	2287311.64			

NAD 83
CENTERLINE ANGLE POINTS

∠ PT	X	Y	∠ 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	2283967.14
5	6050311.17	2299391.54	53	6049217.17	2281356.14
6	6050292.17	2299310.24	54	6049187.67	2281161.14
7	6050197.07	2299199.14	55	6048772.57	2279898.04
8	6050127.97	2299090.24	56	6048459.07	2278600.14
9	6050092.67	2298961.04	57	6048320.67	2276710.44
10	6050118.87	2298684.74	58	6048294.17	2276606.34
11	6050338.87	2298188.64	59	6048169.37	2276408.44
12	6050401.67	2297899.54	60	6047894.27	2276160.84
13	6050367.67	2297603.34	61	6047622.37	2276050.54
14	6049910.47	2296868.44	62	6046811.77	2276063.44
15	6049815.77	2296196.14	63	6045839.37	2275853.54
16	6049676.67	2295893.84	64	6044945.07	2275332.94
17	6048982.67	2295148.94	65	6043998.17	2274481.04
18	6048982.67	2294828.44	66	6043667.37	2274290.34
19	6049085.27	2294466.14	67	6042802.97	2274015.64
20	6049513.87	2293470.84	68	6042249.97	2273548.24
21	6049687.17	2293268.84	69	6041519.97	2271799.04
22	6049758.67	2293221.34	70	6041475.37	2270633.54
23	6050063.67	2292989.34	71	6041810.47	2269525.24
24	6050148.17	2292728.04	72	6042321.97	2268710.44
25	6050106.87	2292401.94	73	6042548.77	2268303.34
26	6050023.97	2292031.54	74	6042442.67	2266795.24
27	6049793.57	2291537.54	75	6042192.87	2266237.54
28	6049713.07	2291370.44	76	6040576.77	2264701.24
29	6049386.07	2291051.84	77	6040108.67	2263779.14
30	6049043.67	2290842.14	78	6040061.57	2263326.34
31	6048913.27	2290730.94	79	6040358.97	2262189.24
32	6048787.07	2290599.04	80	6040389.57	2261457.14
33	6048697.47	2290434.94	81	6040267.07	2260382.14
34	6048640.67	2290111.14	82	6040584.77	2258826.14
35	6048868.27	2289308.54	83	6040714.27	2258575.64
36	6048944.57	2288695.24	84	6041138.77	2258121.74
37	6048961.77	2288529.94	85	6042103.77	2257586.34
38	6049265.67	2288221.44	86	6044851.27	2256960.04
39	6049301.67	2288140.84	87	6045612.07	2256415.04
40	6049313.67	2287847.84	88	6046343.47	2255244.34
41	6049319.17	2287770.94	89	6046514.37	2253886.04
42	6049221.17	2287579.04	90	6045155.97	2248600.64
43	6048913.67	2287282.24	91	6045511.07	2247016.84
44	6048666.17	2286782.04	92	6048819.87	2243829.54
45	6048637.77	2286523.44			
46	6048702.07	2286224.34			
47	6048899.87	2285997.74			
48	6049258.67	2285762.84			



Legend

- 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*

Contours

- -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 OCEAN SURVEY.
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.
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS FOR THE OUTSIDE CHANNEL (100FT. WIDE) TAKEN BY FATHOMETER; THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LEADLINE, AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

THE PROJECT DEPTH IS 15 FROM ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.

VERTICAL CONTROLS:
0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.

176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV.
CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.

225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.

641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.

US Army Corps of Engineers
San Francisco District
450 Market Street
San Francisco, CA 94102

PREPARED UNDER THE DIRECTION OF KEVIN P. ARNETT, LT. COLONEL, C.E., DISTRICT ENGINEER	Surveyed By:	Chart Date: Jun 28, 2022
Submitted: Hydro Survey Team Leader	Plotted By: PDT	Designed by:
Recommended: Chief, Hydro Survey Section	Checked By: PDT	Drawn by: PDT
Approved: Chief, Construction Branch		

NAPA COUNTY — CALIFORNIA

NAPA RIVER
UPPER NAPA
CONDITION SURVEY
14-15 JUNE 2022

US Army Corps of Engineers
San Francisco District
450 Market Street
San Francisco, CA 94102

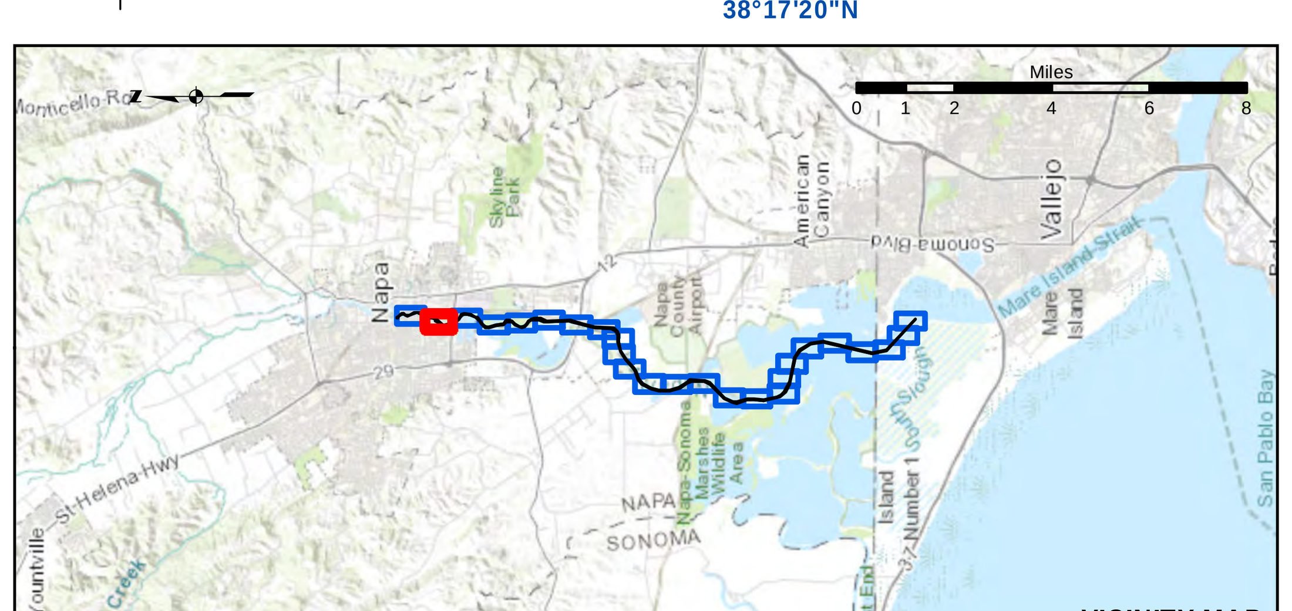
Chart Date: Jun 28, 2022	Designed by:	Drawn by: PDT
Surveyed By:	Plotted By: PDT	Checked By: PDT

PREPARED UNDER THE DIRECTION OF
KEVIN P. ARNETT
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

NAPA COUNTY CALIFORNIA

NAPA RIVER
UPPER NAPA
CONDITION SURVEY
14-15 JUNE 2022



- 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*

Contours
- -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 OCEAN SURVEY.
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.
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS FOR THE OUTSIDE CHANNEL (100FT. WIDE) TAKEN BY FATHOMETER; THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LEADLINE, AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

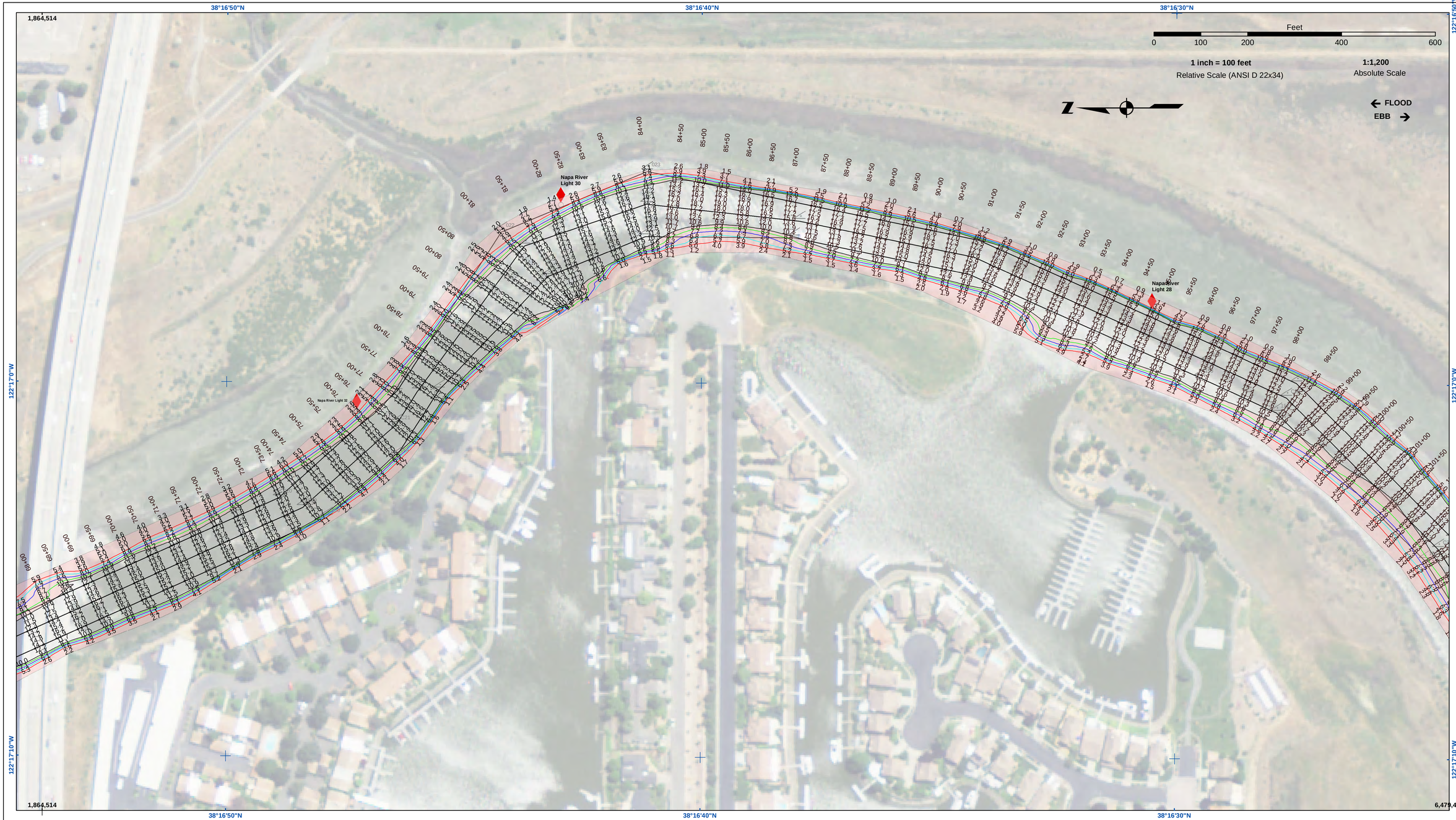
THE PROJECT DEPTH IS 15 FROM ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.

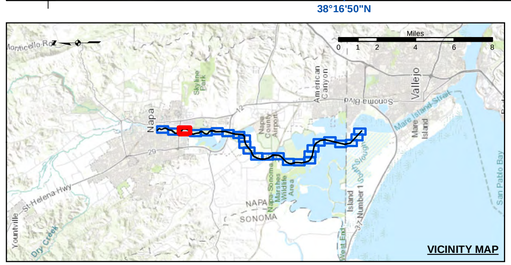
VERTICAL CONTROLS:
0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.

176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV.
CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.

225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.

641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.





- 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*

Contours

-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 OCEAN SURVEY.
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.
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS FOR THE OUTSIDE CHANNEL (100FT. WIDE) TAKEN BY FATHOMETER; THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LEADLINE, AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

THE PROJECT DEPTH IS 15 FROM ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.

VERTICAL CONTROLS:
0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.

176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV.
CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.

225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.

641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.

US Army Corps of Engineers
San Francisco District
450 Market Street
San Francisco, CA 94102

Surveyed by:		Chart Date:	Jun 28, 2022
Plotted By:	PDT	Designed by:	
Checked By:	PDT	Drawn by:	PDT

PREPARED UNDER THE DIRECTION OF
KEVIN P. ARNETT
LT COLONEL, CE, DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

CALIFORNIA
NAPA COUNTY

NAPA RIVER
UPPER NAPA
CONDITION SURVEY
14-15 JUNE 2022

Sheet Reference Number
3 of 25

US Army Corps of Engineers
San Francisco District
450 Market Street
San Francisco, CA 94102

DISCLAIMER
Access Constraints: The United States Government furnishes these data and the recipient accepts and uses them with the express understanding that the US Government makes no warranties, expressed, or implied concerning the accuracy, completeness, readability, usability or suitability for any particular purpose of the information and the data furnished. The United States shall be under no liability whatsoever to any person by reason of any use made thereof. These data belong to the Government. Therefore the recipient fully agrees not to represent these data to anyone as other than Government provided data. The recipient may not transfer these data to others without also transferring this Disclaimer.

Distribution Liability: The data represents the results of data collection/processing for a specific US Army Corps of Engineers activity and indicates the general existing conditions. As such, it is only valid for its intended use, content, time and accuracy specifications. The user is responsible for the results of any of the application of the data for other than its intended purpose.

Chart Date: Jun 28, 2022	Designed by:	Drawn by: PDT
Surveyed By:	Plotted By: PDT	Checked By: PDT

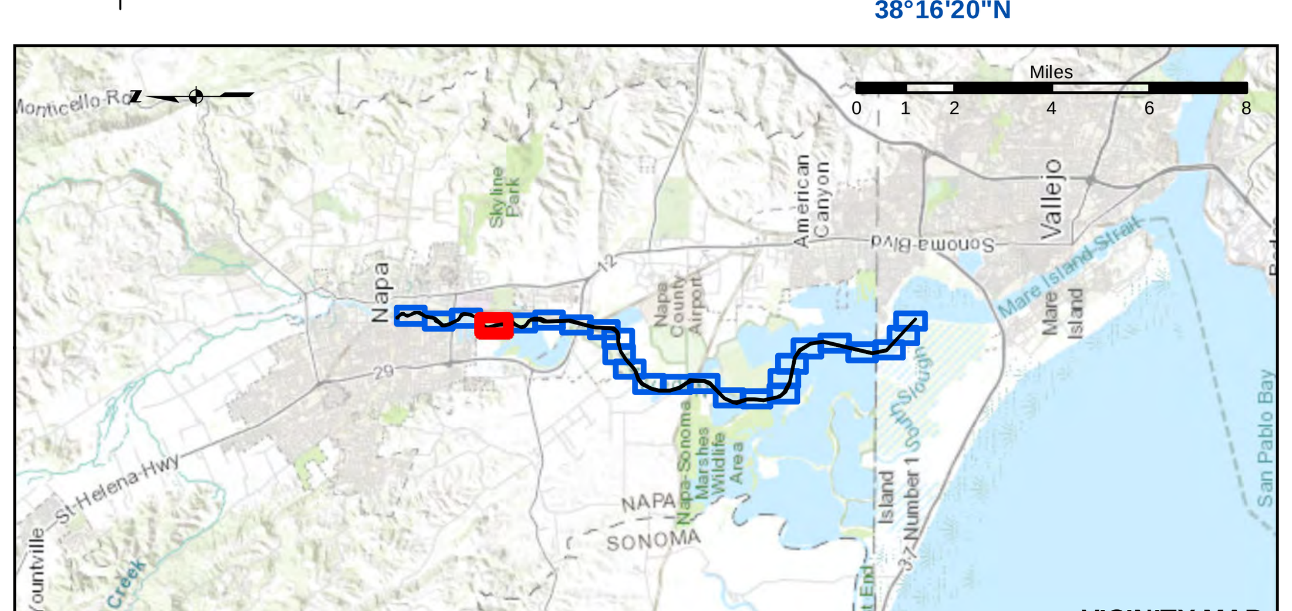
PREPARED UNDER THE DIRECTION OF
KEVIN P. ARNETT
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

CALIFORNIA
NAPA COUNTY

NAPA RIVER
UPPER NAPA
CONDITION SURVEY
14-15 JUNE 2022

Sheet Reference Number
4 of 25



Legend	
Federal Navigation Channel	Beacon, General
Shoaling Area	Obstruction Point
Placement Area	Navigation Buoy (green)
Anchorage Area	Navigation Buoy (red)
Wreck Area	Shoalest Sounding*
Submerged Wreck	
Angle Point	

Contours

- -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 OCEAN SURVEY.
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.
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS FOR THE OUTSIDE CHANNEL (100FT. WIDE) TAKEN BY FATHOMETER; THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LEADLINE, AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

THE PROJECT DEPTH IS 15 FROM ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.

VERTICAL CONTROLS:
0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.

176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV.
CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.

225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.

641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.

US Army Corps of Engineers
San Francisco District
450 Market Street
San Francisco, CA 94102

Chart Date: Jun 28, 2022	Surveyed By:
Designed by:	Plotted By: PDT
Drawn by: PDT	Checked By: PDT

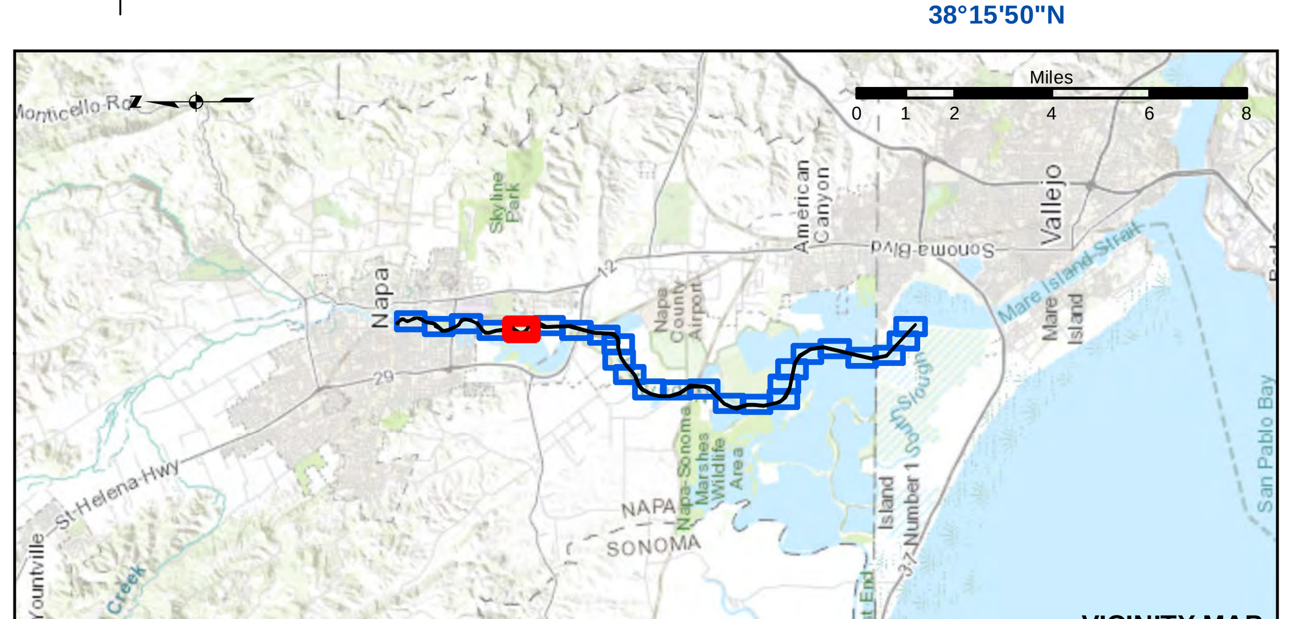
PREPARED UNDER THE DIRECTION OF
KEVIN P. ARNETT
LT. COLONEL, C.E., DISTRICT ENGINEER

Submitted: Hydro Survey Team Leader
Recommended: Chief, Hydro Survey Section
Approved: Chief, Construction Branch

CALIFORNIA
NAPA COUNTY

NAPA RIVER
UPPER NAPA
CONDITION SURVEY
14-15 JUNE 2022

Sheet Reference Number
5 of 25



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*

Contours
-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 OCEAN SURVEY.
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.
SURVEYED BY THE CORPS OF ENGINEERS.
SOUNDINGS FOR THE OUTSIDE CHANNEL (100FT. WIDE) TAKEN BY FATHOMETER; THE INSIDE CHANNEL (60 FT. WIDE) TAKEN BY LEADLINE, AND ARE SHOWN TO THE NEAREST FOOT AND TENTHS OF A FOOT.
SOUNDINGS ARE BASED ON THE DATUM OF MEAN LOWER LOW WATER AT THE LOCALITY.

THE PROJECT DEPTH IS 15 FROM ENTRANCE AT THE MARE ISLAND CAUSEWAY TO ASYLUM SLOUGH, THENCE 10 FEET TO HEAD OF NAVIGATION.

VERTICAL CONTROLS:
0+00 TO 175+00 - NRFP4 - 30.54ft - USACE - RTK BASE STATION TRANSECT 11 - 6.593m MLLW - USACE - MLLW LEVELED FROM 20 AND TIDAL 5 FROM TIDE STATION 941 5623 ON 3/29/2012.

176+00 TO 224+00 - NAPAR01 - 2.652m MLLW, -29.111m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV.
CALCULATED FROM TRANSECT 11 AND NRFP4 USING RTK OBSERVATIONS PID PENDING.

225+00 TO 640+00 - NAPAR02 - 3.653m MLLW -28.241m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. CALCULATED BY INTERPOLATING ELEVATIONS BETWEEN NOAA TIDE STATIONS 941 5623 AND 941 5218 PID PENDING.

641+00 TO 692+00 - NAPAR03 - 3.553m MLLW -28.416m WGS-84 - USACE - RTK BASE STATION WGS-84 ELEVATION FROM OPUS SOLUTION MLLW ELEV. TRANSFERRED FROM BM 5218 J 1976 VIA RTK ON 4/10/2012 PID PENDING.