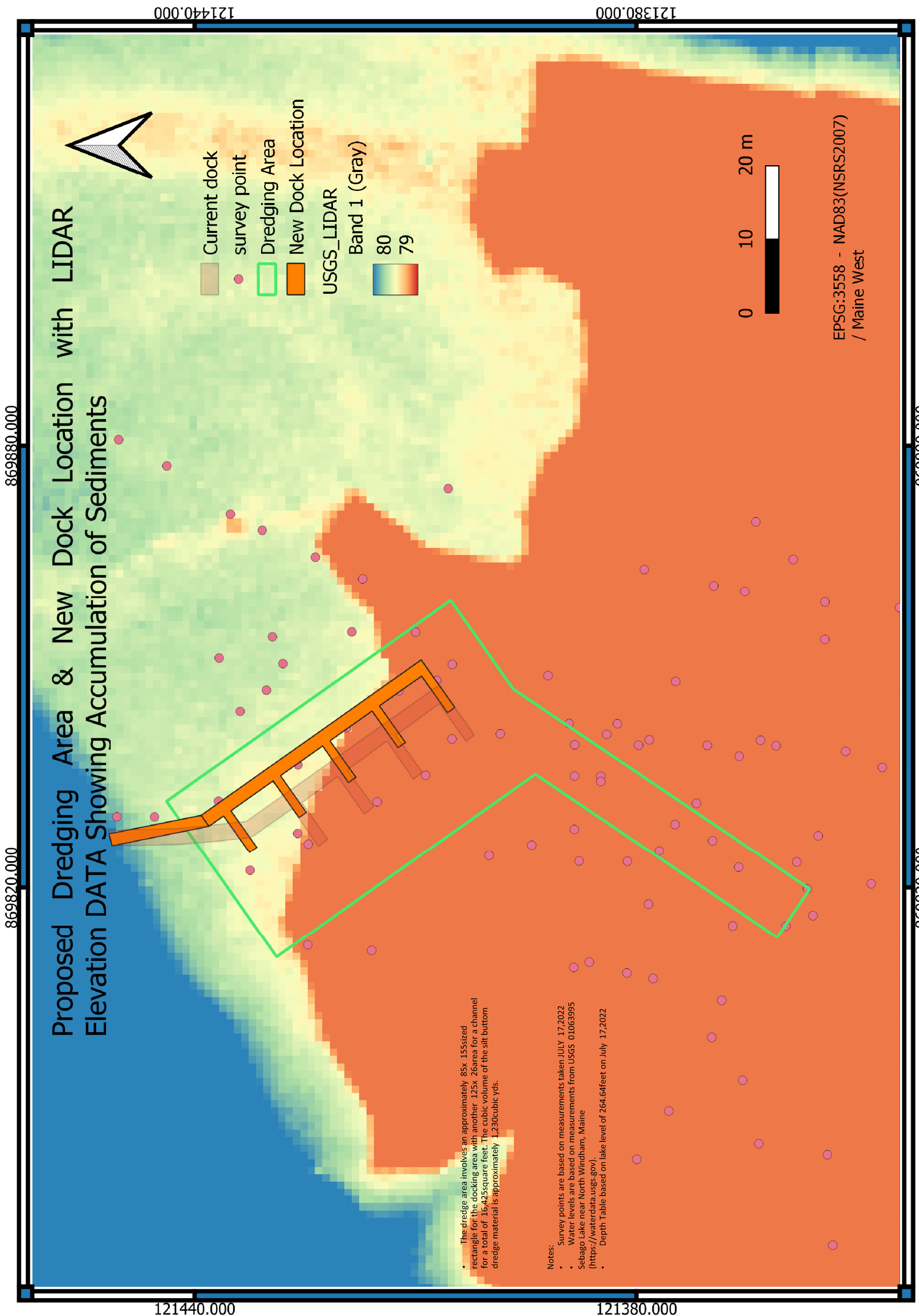


# Proposed Dredging Area & New Dock Location with LIDAR Elevation DATA Showing Accumulation of Sediments



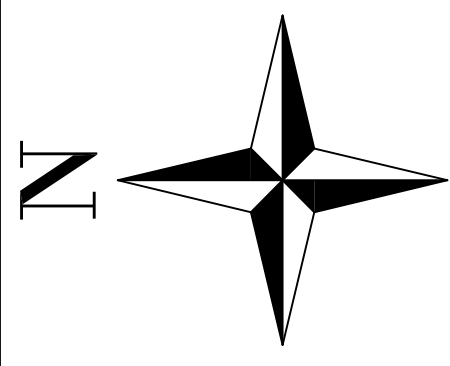
Notes:

- The dredge area involves an approximately 85x 155sized rectangle for the docking area with another 125x 26area for a channel for a total of 16,425square feet. The cubic volume of the silt bottom dredge material is approximately 1,230cubic yds.
- Survey points are based on measurements taken JULY 17,2022
- Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov/>)
- Depth Table based on lake level of 264.64feet on July 17,2022

## KETTLE COVE

### LIDAR Sediment Map

Displays depths based on LIDAR to show sediment accumulation.



LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
 COUNTY: Cumberland, ME

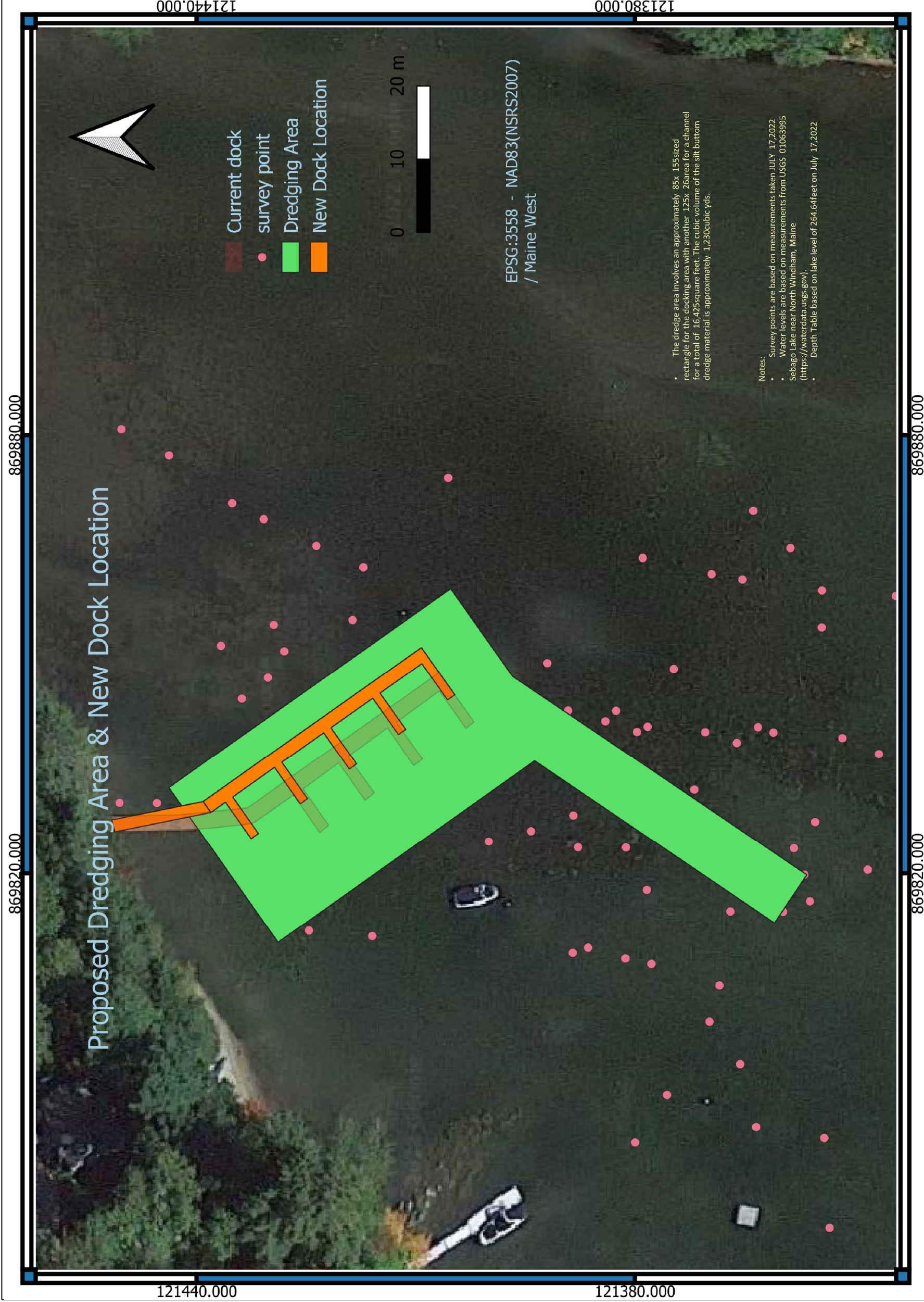
PROJECT NAME: KCOA Dredging Plan  
 PURPOSE: Increase boating and water access.  
 APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
 DESIGNED BY: Mahmoud Hammad, Civil Engineer  
 DATE: November 30,2022

APPROVED BY:

SCALE: -----

SHEET: 1 of 10

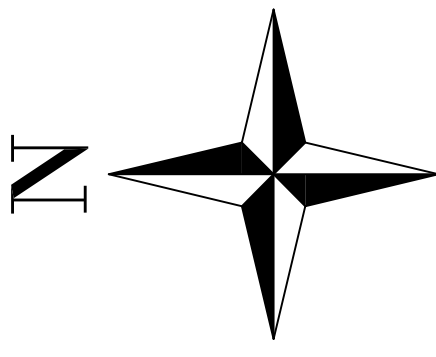
EPSG:3558 - NAD83(NSRS2007) / Maine West



## KETTLE COVE

### Updated Dock Location

Displays the proposed dock location in relation to the existing dock location and proposed dredging location.



LOCATION: Northeasterly part of Kettle Cove, Casco, ME (Near Leander Lane)

COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan

PURPOSE: Increase boating and water access.

APPLICATION BY: Kettle Cove Owner's Association (KCOA)

DESIGNED BY: Mahmoud Hammad, Civil Engineer

DATE: November 30,2022

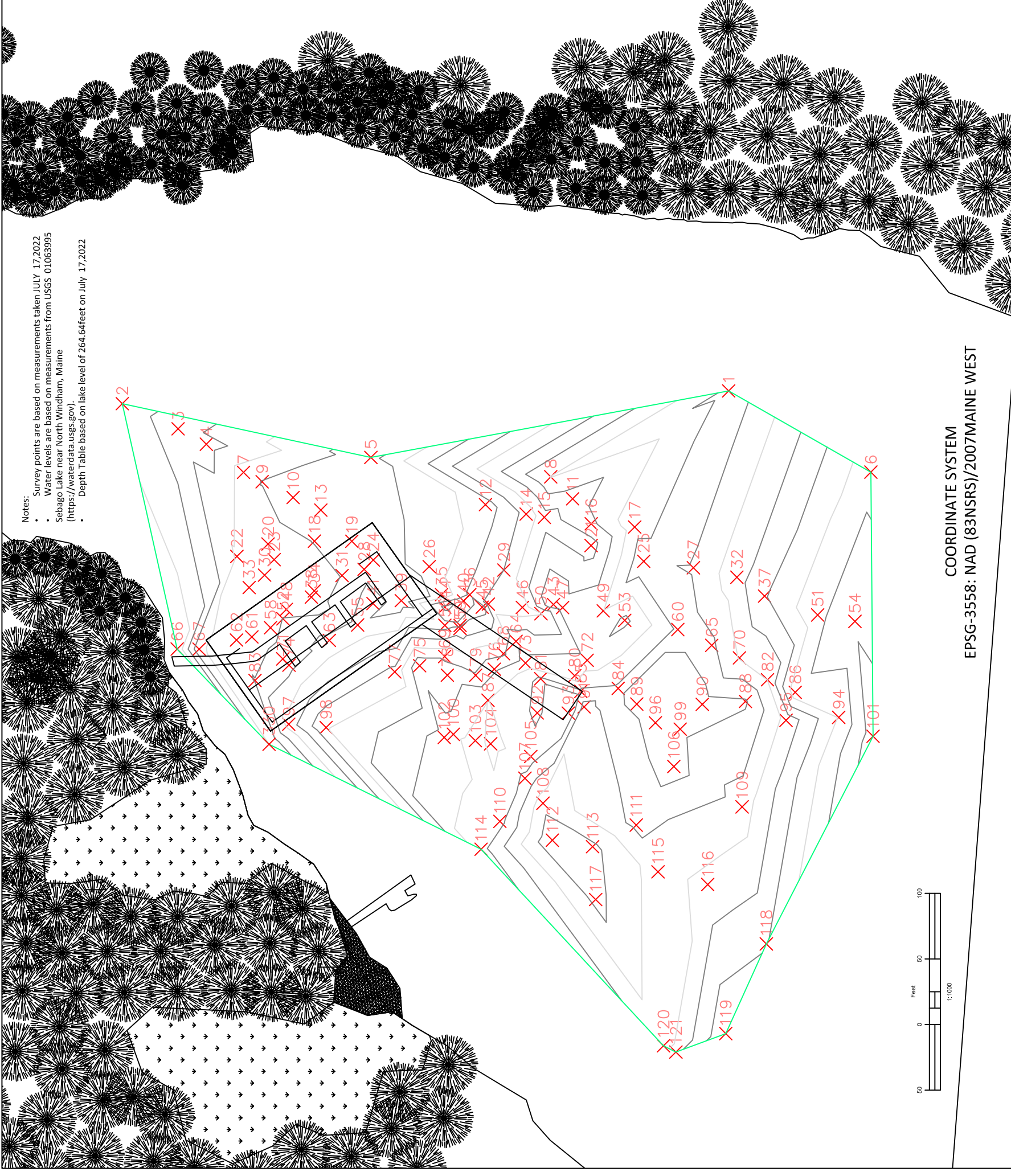
APPROVED BY:

SCALE: ----

SHEET: 2 of 10



Notes:  
 • Survey points are based on measurements taken JULY 17, 2022  
 • Water levels are based on measurements from USGS 01063995  
 Sebago Lake near North Windham, Maine  
 (<https://waterdata.usgs.gov/>)  
 • Depth Table based on lake level of 264.64feet on July 17, 2022



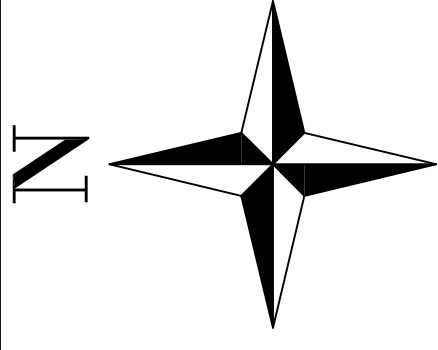
COORDINATE SYSTEM  
 EPSG-3558: NAD (83NSRS)/2007MAINE WEST

Point Number	Easting	Northing	Elevation (m)	Elevation (ft)
1	669886.0258	124463.2616	79.831	262.240
2	669880.785	124450.1183	79.870	262.040
3	669877.2319	124443.1779	79.870	262.040
4	669874.1574	124405.5713	79.817	261.940
5	669870.1779	124385.1427	79.818	261.940
6	669869.6311	124383.8147	79.849	262.130
7	669868.49	124430.8189	79.748	261.640
8	669864.8836	124423.6133	79.817	261.940
9	669864.5487	124358.7857	79.828	262.050
10	669864.5487	124358.7857	79.828	262.050
11	669861.0233	124417.8272	79.817	261.940
12	669861.0233	124417.8272	79.817	261.940
13	669860.984	124369.5205	79.835	262.040
14	669860.984	124369.5205	79.835	262.040
15	669860.7421	124365.3017	79.871	262.170
16	669858.7471	124354.4198	79.843	262.040
17	669858.7471	124354.4198	79.843	262.040
18	669854.7026	124348.5455	79.848	262.040
19	669854.7026	124348.5455	79.848	262.040
20	669854.0288	124429.4401	79.878	261.940
21	669853.8979	124354.4428	79.874	262.040
22	669853.1707	124336.6753	79.894	262.170
23	669853.1707	124336.6753	79.894	262.170
24	669850.3043	124405.013	79.817	261.940
25	669850.0187	124342.2374	79.850	262.040
26	669848.7995	124392.02	79.887	262.140
27	669848.5207	124330.6889	79.845	259.990
28	669848.5207	124330.6889	79.845	259.990
29	669847.648	124330.6889	79.845	259.990
30	669847.648	124330.6889	79.845	259.990
31	669846.805	124430.7508	79.894	262.170
32	669846.7232	124412.2514	79.848	261.640
33	669846.3065	124330.588	79.869	259.740
34	669843.9303	124333.6133	79.878	261.740
35	669843.9303	124333.6133	79.878	261.740
36	669842.2812	124380.1608	79.887	262.140
37	669842.2519	124382.6055	79.892	261.130
38	669841.9407	124334.1635	79.805	259.530
39	669841.6964	124443.3852	79.894	262.170
40	669841.6964	124443.3852	79.894	262.170
41	669840.1858	124405.0509	79.872	261.900
42	669840.064	124378.2822	79.835	262.040
43	669839.8953	124363.1716	79.852	262.340
44	669839.8779	124388.3962	79.835	262.040
45	669839.8779	124388.3962	79.835	262.040
46	669839.8254	124370.8468	79.835	262.040
47	669839.2629	124361.0438	79.879	262.040
48	669838.8318	124425.176	79.863	261.600
49	669838.4973	124351.623	79.852	262.340
50	669837.879	124380.0057	79.893	262.340
51	669837.844	124380.0057	79.893	262.340
52	669836.6671	124425.8436	79.848	261.640
53	669836.3063	124346.6311	79.843	261.540
54	669836.0831	124393.1905	79.885	259.040
55	669835.7211	124408.6371	79.887	261.440
56	669835.7211	124408.6371	79.887	261.440
57	669835.115	124384.4601	79.814	261.200
58	669834.9323	124428.8619	79.878	261.740
59	669834.9323	124428.8619	79.878	261.740
60	669834.1623	124334.3077	79.891	262.140
61	669833.172	124348.5455	79.882	262.040
62	669833.172	124348.5455	79.882	262.040
63	669831.8329	124415.2088	79.887	261.440
64	669831.4421	124371.877	79.840	261.530
65	669830.5379	124326.4375	79.890	262.040
66	669829.8318	124400.9358	79.892	262.440
67	669829.8318	124400.9358	79.892	262.440
68	669828.8453	124374.729	79.868	262.060
69	669827.8938	124388.4884	79.858	262.060
70	669827.8924	124320.0064	79.896	259.830
71	669827.8519	124326.006	79.817	261.940
72	669827.0384	124335.4413	79.882	262.040
73	669827.0384	124335.4413	79.882	262.040
74	669825.8998	124424.5681	79.817	261.540
75	669825.7618	124394.2359	79.840	261.530
76	669824.9602	124376.8064	79.840	261.530
77	669824.2426	124400.02	79.835	262.040
78	669824.2426	124400.02	79.835	262.040
79	669823.5453	124361.2462	79.844	262.040
80	669823.4798	124358.347	79.882	262.040
81	669822.743	124366.1389	79.891	262.140
82	669822.6934	124313.6741	79.899	259.840
83	669822.6934	124313.6741	79.899	259.840
84	669822.6934	124313.6741	79.899	259.840
85	669819.8096	124356.6103	79.891	262.140
86	669819.8811	124307.0431	79.816	259.240
87	669817.7394	124378.4837	79.852	262.340
88	669817.4674	124318.0811	79.806	260.150
89	669816.2902	124328.611	79.821	260.240
90	669816.1923	124358.6578	79.830	259.940
91	669816.1923	124358.6578	79.830	259.940
92	669814.7964	124366.6238	79.891	262.140
93	669814.7935	124359.2909	79.852	262.340
94	669813.7531	124296.9886	79.887	259.940
95	669813.7531	124296.9886	79.887	259.940
96	669812.6233	124398.5192	79.821	262.240
97	669812.1879	124424.6306	79.826	261.240
98	669811.4057	124415.8676	79.804	260.840
99	669811.0313	124333.482	79.809	260.200
100	669809.8823	124388.0786	79.805	258.940
101	669809.8823	124388.0786	79.805	258.940
102	669809.1126	124388.5339	79.882	260.440
103	669808.357	124381.3153	79.821	260.240
104	669807.6181	124377.7631	79.867	260.390
105	669804.6846	124386.4433	79.821	260.240
106	669804.6846	124386.4433	79.821	260.240
107	669799.6315	124369.2986	79.891	262.140
108	669793.8304	124365.6039	79.869	259.740
109	669792.8775	124319.3862	79.827	259.930
110	669792.8775	124319.3862	79.827	259.930
111	669792.8775	124319.3862	79.827	259.930
112	669795.2277	124363.6009	79.808	258.540
113	669793.7397	124354.0444	79.818	259.640
114	669793.1340	124379.8857	79.818	260.230
115	669791.8884	124338.6991	79.824	259.930
116	669791.8884	124338.6991	79.824	259.930
117	669791.1504	124313.7536	79.805	259.530
118	669791.1504	124313.7536	79.805	259.530
119	669790.3137	124323.818	79.809	259.380
120	669787.4886	124337.6389	79.820	259.940
121	669786.0299	124334.7567	79.866	259.730
122	669786.0299	124334.7567	79.866	259.730
123	669785.5152	124329.1207	79.860	261.811

# KETTLE COVE

## ELEVATIONS MAP

Displays the elevations of + 100 sample points taken on July 17, 2022



LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
 COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan  
 PURPOSE: Increase boating and water access.  
 APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
 DESIGNED BY: Mahmoud Hammad, Civil Engineer  
 DATE: November 30, 2022

APPROVED BY:

SCALE 1:1000

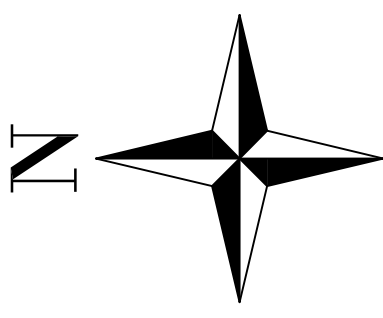
SHEET: 3 of 10



# KETTLE COVE

## Dredging Heatmap (Before)

Provides a visual heatmap of the proposed dredging location before material is removed.



LOCATION: Northeastern part of Kettle Cove, Casco, ME (Near Leander Lane)

COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan

PURPOSE: Increase boating and water access.

APPLICATION BY: Kettle Cove Owner's Association (KCOA)

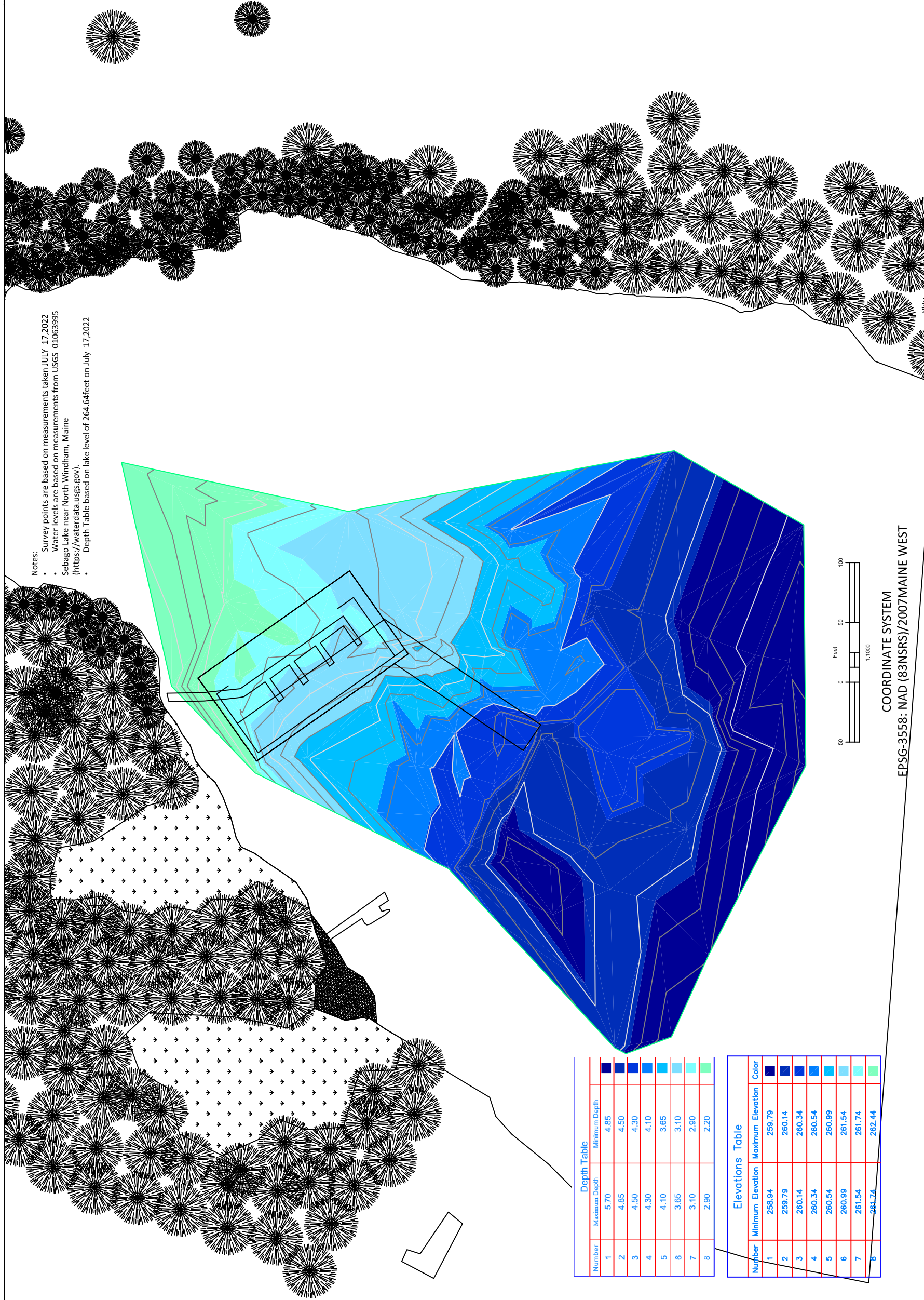
DESIGNED BY: Mahmoud Hammad, Civil Engineer

DATE: November 30, 2022

APPROVED BY:

SCALE 1:1,000

SHEET: 4 of 10



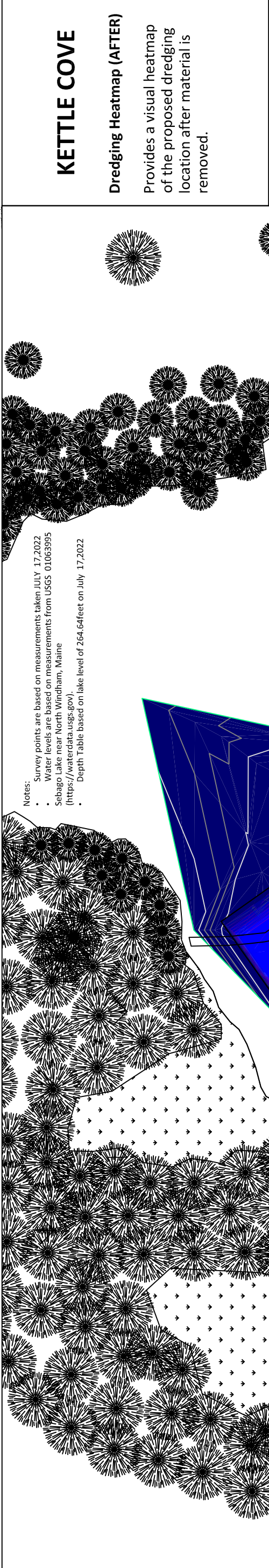
- Notes:
- Survey points are based on measurements taken JULY 17, 2022
  - Water levels are based on measurements from USGS 01063995
  - Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov>).
  - Depth Table based on lake level of 264.64feet on July 17, 2022

Number	Depth Table		Color
	Maximum Depth	Minimum Depth	
1	5.70	4.85	Dark Blue
2	4.85	4.50	Blue
3	4.50	4.30	Light Blue
4	4.30	4.10	Very Light Blue
5	4.10	3.65	Lightest Blue
6	3.65	3.10	Lightest Blue
7	3.10	2.90	Lightest Blue
8	2.90	2.20	Lightest Blue

Number	Elevations Table		Color
	Minimum Elevation	Maximum Elevation	
1	258.94	259.79	Dark Blue
2	259.79	260.14	Blue
3	260.14	260.34	Light Blue
4	260.34	260.54	Very Light Blue
5	260.54	260.99	Lightest Blue
6	260.99	261.54	Lightest Blue
7	261.54	261.74	Lightest Blue
8	261.74	262.44	Lightest Blue

COORDINATE SYSTEM  
EPCG-3558: NAD (83NSRS)/2007MAINE WEST



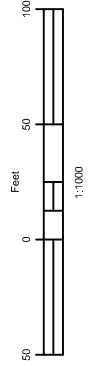


Notes:

- Survey points are based on measurements taken JULY 17, 2022
- Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov>).
- Depth Table based on lake level of 264.64 feet on July 17, 2022

Depth Table		
Number	Maximum Depth	Minimum Depth
1	6.11	5.78
2	5.78	5.45
3	5.45	5.13
4	5.13	4.80
5	4.80	4.47
6	4.47	4.14
7	4.14	3.81
8	3.81	3.49
9	3.49	3.16
10	3.16	2.83
11	2.83	2.50
12	2.50	2.17

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	258.53	258.86	■
2	258.86	259.19	■
3	259.19	259.51	■
4	259.51	259.84	■
5	259.84	260.17	■
6	260.17	260.50	■
7	260.50	260.83	■
8	260.83	261.15	■
9	261.15	261.48	■
10	261.48	261.81	■
11	261.81	262.14	■
12	262.14	262.47	■

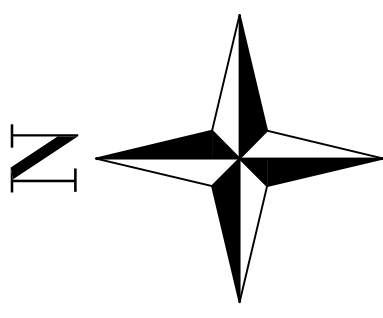


COORDINATE SYSTEM  
 EPSG-3558: NAD (83NSRS)/2007MAINE WEST

# KETTLE COVE

## Dredging Heatmap (AFTER)

Provides a visual heatmap of the proposed dredging location after material is removed.



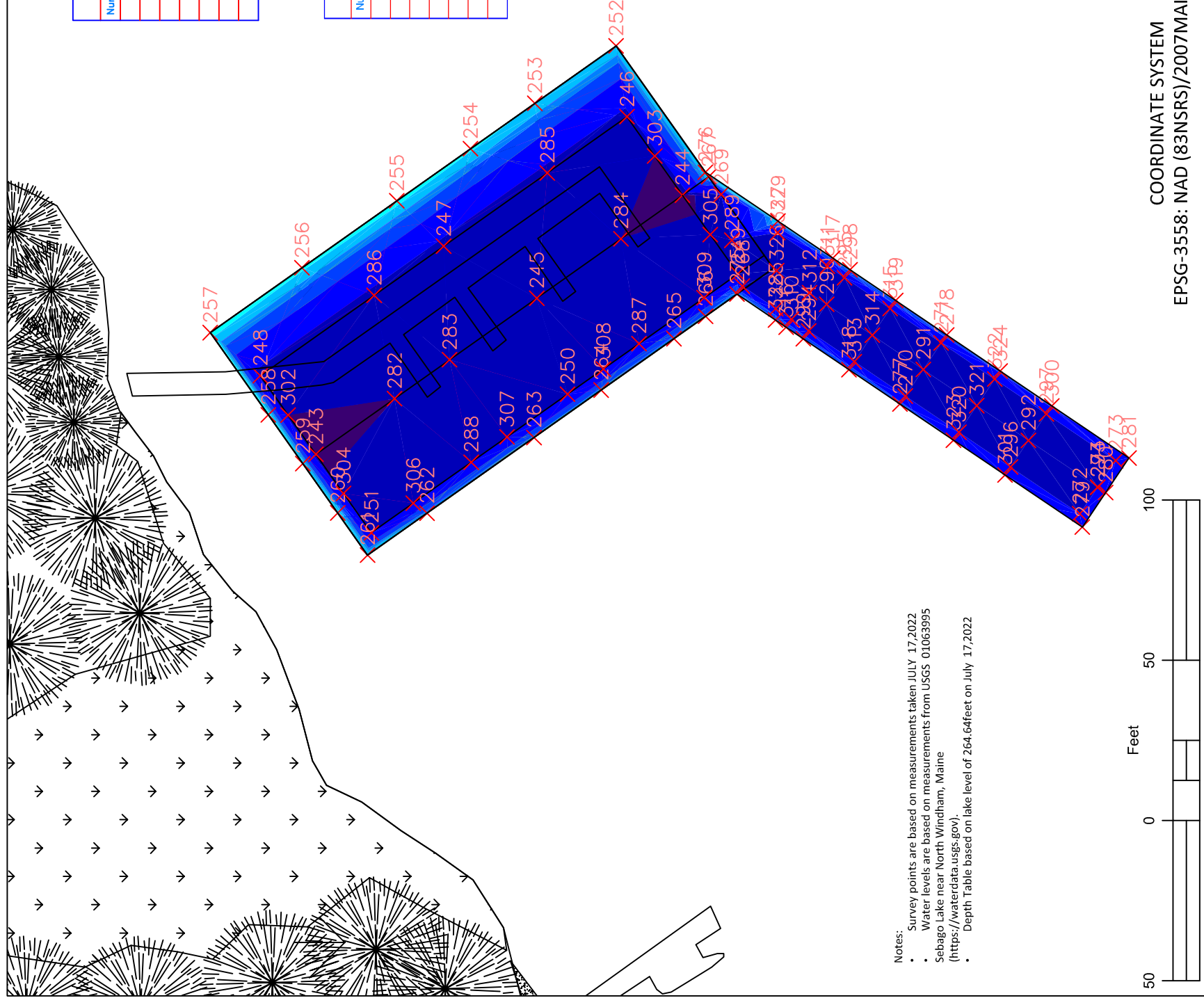
LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
 COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan  
 PURPOSE: Increase boating and water access.  
 APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
 DESIGNED BY: Mahmoud Hammad, Civil Engineer  
 DATE: November 2022, 30

APPROVED BY:

SCALE 1:1,000

SHEET: 5 of 10

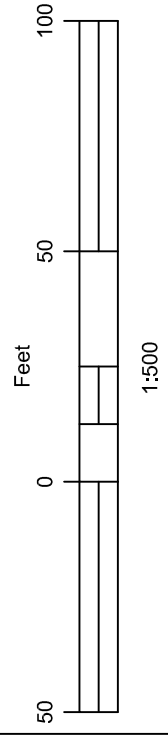


Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	258.64	258.80	Dark Blue
2	258.80	259.14	Blue
3	259.14	260.27	Light Blue
4	260.27	260.91	Very Light Blue
5	260.91	261.18	Lightest Blue
6	261.18	261.59	White
7	261.59	261.89	Lightest Cyan

Depth Table			
Number	Maximum Elevation	Minimum Elevation	Color
1	6.00	5.84	Dark Blue
2	5.84	5.50	Blue
3	5.50	4.37	Light Blue
4	4.37	3.73	Very Light Blue
5	3.73	3.46	Lightest Blue
6	3.46	3.05	White
7	3.05	2.75	Lightest Cyan

Notes:

- Survey points are based on measurements taken JULY 17, 2022
- Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov/>)
- Depth Table based on lake level of 264.64feet on July 17, 2022



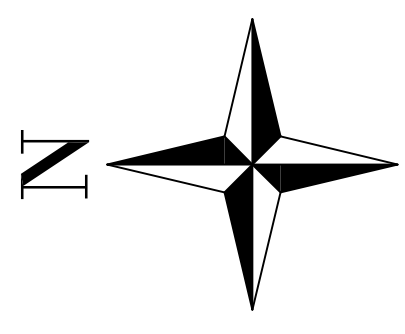
COORDINATE SYSTEM  
EPSG-3558: NAD (83NSRS)/2007MAINE WEST

Point Number	Easting	Northing	Elevation (m)	Elevation (ft)
243	869820.1484	121433.7757	78.834	258.64
244	869844.7766	121398.9281	78.834	258.64
245	869834.988	121412.7785	78.884	258.80
246	869852.244	121404.2056	78.883	258.80
247	869839.9299	121421.6294	78.883	258.80
248	869827.6158	121439.0532	78.883	258.80
249	869837.3093	121393.6656	78.986	259.14
250	869825.8621	121409.8478	78.986	259.14
251	869812.6811	121438.4982	78.986	259.14
252	869838.9814	121405.2348	79.717	261.54
253	869853.515	121412.9694	79.731	261.59
254	869849.2006	121419.0741	79.763	261.69
255	869844.2441	121426.0872	79.790	261.78
256	869837.8787	121435.0939	79.772	261.72
257	869831.7144	121443.816	79.805	261.83
258	869823.9001	121438.2934	79.825	261.89
259	869819.2688	121435.0202	79.773	261.72
260	869814.5728	121431.7013	79.782	261.75
261	869810.557	121428.8632	79.761	261.68
262	869814.5498	121423.2136	79.623	261.23
263	869821.7425	121413.0363	79.583	261.10
264	869826.2548	121406.6517	79.589	261.12
265	869831.1438	121399.7339	79.617	261.21
266	869833.2717	121396.7231	79.579	261.09
267	869846.5358	121396.439	79.707	261.51
268	869836.1366	121393.2303	78.986	259.14
269	869844.8558	121395.2517	78.986	259.14
270	869825.6825	121377.7459	78.986	259.14
271	869830.7352	121374.332	78.986	259.14
272	869814.4934	121361.1659	78.986	259.14
273	869819.5461	121357.7554	78.986	259.14
274	869817.0198	121359.4606	78.986	259.14
275	869835.3787	121393.7418	79.620	261.22
276	869846.9654	121396.7427	79.706	261.50
277	869824.9246	121378.2541	79.424	260.58
278	869831.4938	121373.82	79.453	260.67
279	869813.224	121360.9195	79.346	260.32
280	869816.5082	121358.7027	79.330	260.27
281	869819.7925	121356.4859	79.290	260.14
282	869825.4344	121426.2964	78.883	258.80
283	869829.1349	121421.0604	78.883	258.80
284	869840.6399	121404.7814	78.883	258.80
285	869846.8979	121411.77	78.883	258.80
286	869835.2634	121438.2321	78.883	258.80
287	869830.6666	121403.0488	78.986	259.14
288	869819.3898	121419.0058	78.986	259.14
289	869840.4962	121394.241	78.986	259.14
290	869834.4087	121385.2223	78.986	259.14
291	869828.2089	121376.0373	78.986	259.14
292	869821.4626	121366.0426	78.986	259.14
293	869817.0198	121359.4606	78.986	259.14
294	869831.8824	121386.9276	78.986	259.14
295	869836.935	121383.5171	78.986	259.14
296	869818.9362	121367.7479	78.986	259.14
297	869823.9889	121364.3374	78.986	259.14
298	869837.6929	121383.0055	79.608	261.18
299	869831.1245	121387.4391	79.524	260.91
300	869824.7468	121363.8258	79.377	260.42
301	869818.1783	121368.2594	79.299	260.17
302	869823.8821	121436.4144	78.883	258.80
303	869848.5103	121401.5669	78.883	258.80
304	869816.4148	121431.1369	78.935	258.97
305	869841.043	121396.2894	78.935	258.97
306	869815.4959	121424.5154	78.986	259.14
307	869821.7931	121415.6052	78.986	259.14
308	869828.2611	121406.4534	78.986	259.14
309	869835.036	121396.8672	78.986	259.14
310	869832.9835	121388.5589	78.986	259.14
311	869838.0361	121385.1483	78.986	259.14
312	869835.5098	121386.8536	78.986	259.14
313	869828.9527	121382.5873	78.986	259.14
314	869831.479	121380.882	78.986	259.14
315	869834.0054	121379.1767	78.986	259.14
316	869832.2256	121389.0704	79.557	261.01
317	869838.794	121384.6368	79.579	261.09
318	869828.1948	121383.0988	79.500	260.83
319	869834.7633	121378.6652	79.559	261.02
320	869822.247	121372.6527	78.986	259.14
321	869824.7733	121370.9475	78.986	259.14
322	869827.2997	121369.2422	78.986	259.14
323	869821.4891	121373.1643	79.342	260.31
324	869828.0576	121368.7306	79.397	260.49
325	869833.9946	121390.0569	78.986	259.14
326	869837.6134	121389.97	78.986	259.14
327	869841.2321	121389.8831	78.986	259.14
328	869832.909	121390.083	79.572	261.06
329	869842.3177	121389.857	79.690	261.45

# KETTLE COVE

## Dredging Heatmap (Detail)

Provides a visual heatmap of proposed dredging location depths and elevations.

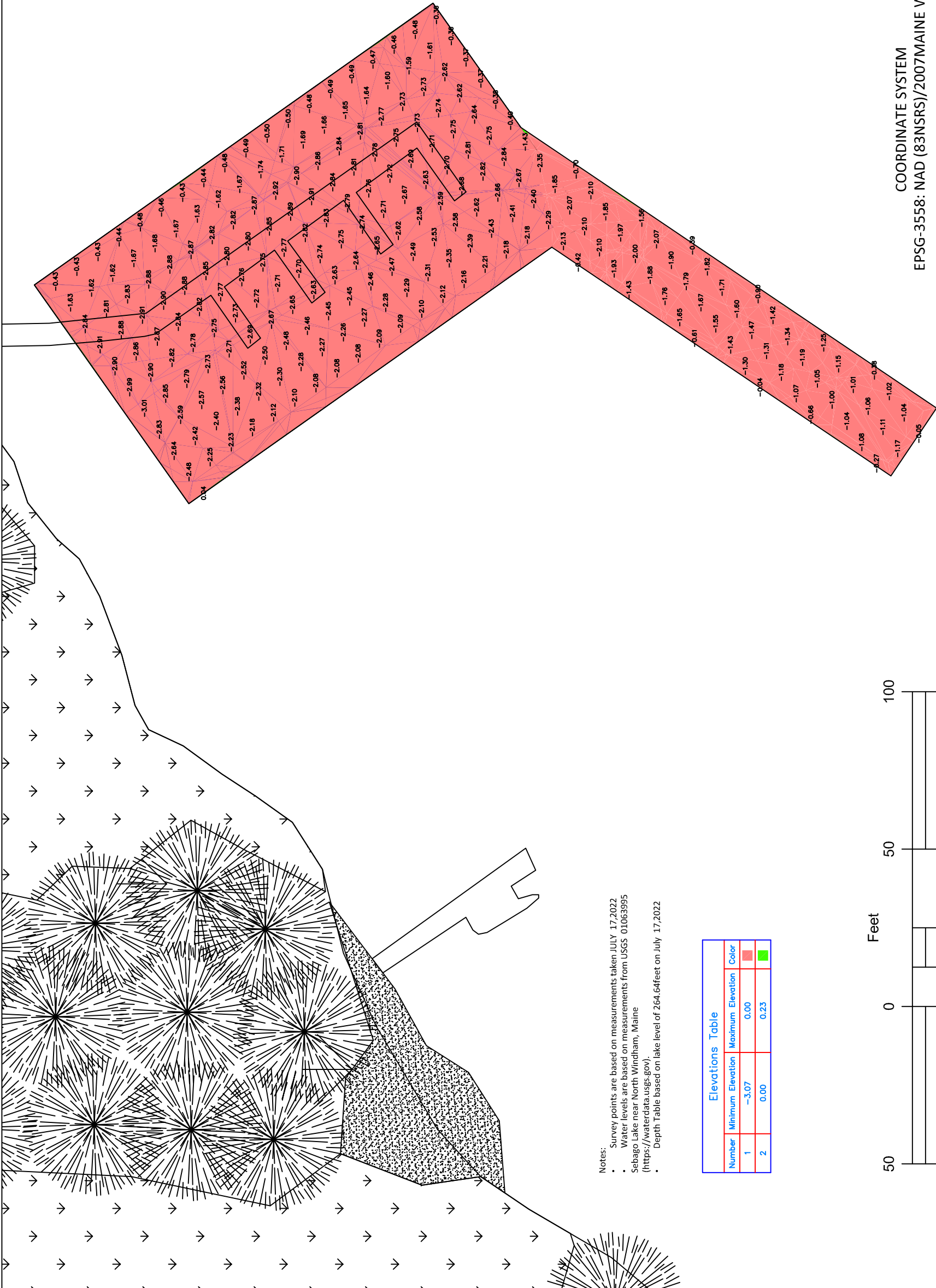


LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan  
PURPOSE: Increase boating and water access.  
APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
DESIGNED BY: Mahmoud Hammad, Civil Engineer  
DATE: November 30, 2022

APPROVED BY:  
SCALE 1:500  
SHEET: 6 of 10

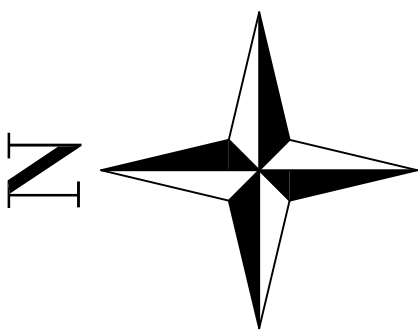




# KETTLE COVE

## Dredging Depth Map

Displays the depth of sediment the project will remove.



LOCATION: Northeasterly part of Kettle Cove, Casco, ME (Near Leander Lane)

COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan

PURPOSE: Increase boating and water access.

APPLICATION BY: Kettle Cove Owner's Association (KCOA)

DESIGNED BY: Mahmoud Hammad, Civil Engineer

DATE: November 30, 2022

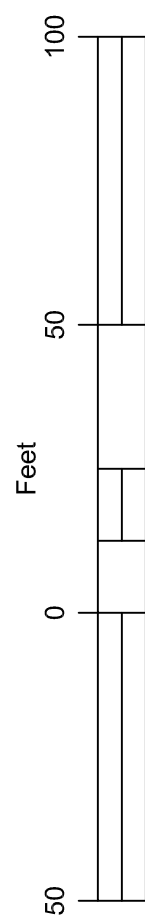
APPROVED BY:

SCALE 1:400

SHEET: 7 of 10

- Notes:
- Survey points are based on measurements taken JULY 17, 2022
  - Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov>)
  - Depth Table based on lake level of 264.64feet on July 17, 2022

Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-3.07	0.00	Red
2	0.00	0.23	Green

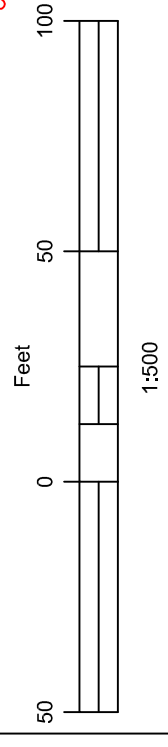


1:400

COORDINATE SYSTEM  
EPSG-3558: NAD (83NSRS)/2007MAINE WEST



- Notes:
- The dredge area involves an approximately 85x 155sized rectangle for the docking area with another 125x 26area for a channel for a total of 16,425square feet. The cubic volume of the silt bottom dredge material is approximately 1,230cubic yds.
  - Survey points are based on measurements taken JULY 17, 2022
  - Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov>).
  - Depth Table based on lake level of 264.64feet on July 17, 2022



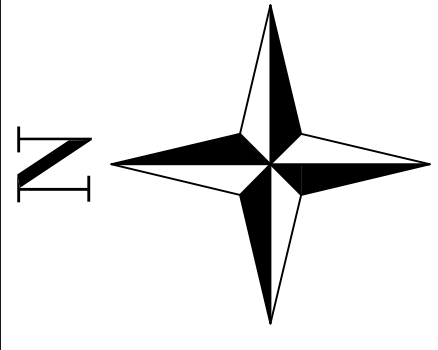
COORDINATE SYSTEM  
 EPSG-3558: NAD (83NSRS)/2007MAINE WEST

Point Number	Easting	Northing	Elevation (m)	Elevation (ft)
252	869858.9814	121405.2348	79.717	261.54
253	869853.515	121412.9694	79.731	261.59
254	869849.2006	121419.0741	79.763	261.69
255	869844.2441	121426.0872	79.790	261.78
256	869837.8787	121435.0939	79.772	261.72
257	869831.7144	121443.816	79.805	261.83
258	869823.9001	121438.2934	79.825	261.89
259	869819.2688	121435.0202	79.773	261.72
260	869814.5728	121431.7013	79.782	261.75
261	869810.557	121428.8632	79.761	261.68
262	869814.5498	121423.2136	79.623	261.23
263	869821.7425	121413.0363	79.583	261.10
264	869826.2548	121406.6517	79.589	261.12
265	869831.1438	121399.7339	79.617	261.21
266	869833.2717	121396.7231	79.579	261.09
267	869846.5358	121396.439	79.707	261.51
275	869835.3787	121393.7418	79.620	261.22
276	869846.9654	121396.7427	79.706	261.50
277	869824.9246	121378.2541	79.424	260.58
278	869831.4938	121373.82	79.453	260.67
279	869813.224	121360.9195	79.346	260.32
280	869816.5082	121358.7027	79.330	260.27
281	869819.7925	121356.4859	79.290	260.14
298	869837.6929	121383.0055	79.608	261.18
299	869831.1245	121387.4391	79.524	260.91
300	869824.7468	121363.8258	79.377	260.42
301	869818.1783	121368.2594	79.299	260.17
316	869832.2256	121389.0704	79.557	261.01
317	869838.794	121384.6368	79.579	261.09
318	869828.1948	121383.0988	79.500	260.83
319	869834.7633	121378.6652	79.559	261.02
323	869821.4891	121373.1643	79.342	260.31
324	869828.0576	121368.7306	79.397	260.49
328	869832.909	121390.083	79.572	261.06
329	869842.3177	121389.857	79.690	261.45

# KETTLE COVE

## Dredging Layout Outline

Highlights the GPS coordinates and elevations of the outer dredging borders.



LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
 COUNTY: Cumberland, ME

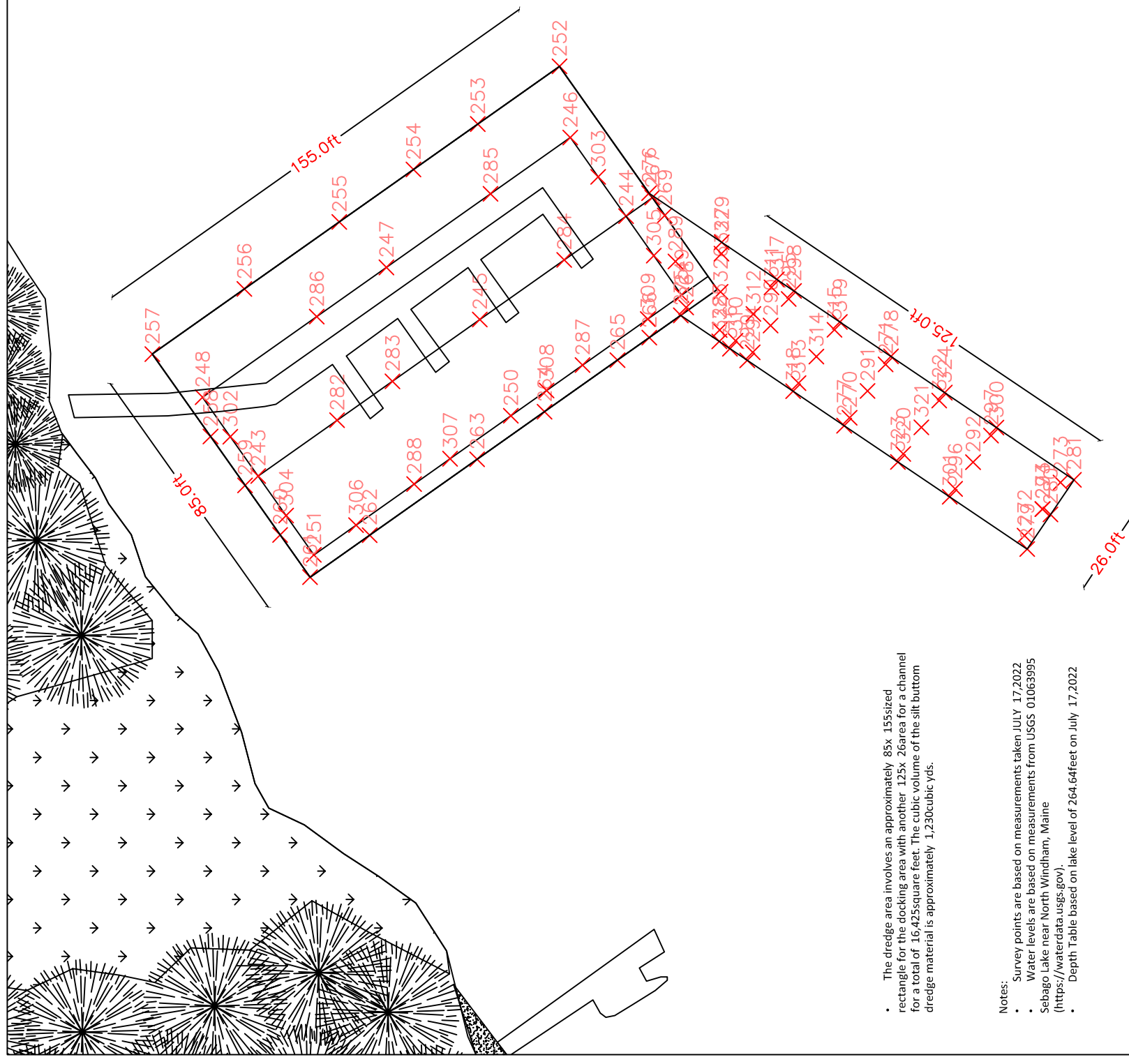
PROJECT NAME: KCOA Dredging Plan  
 PURPOSE: Increase boating and water access.  
 APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
 DESIGNED BY: Mahmoud Hammad, Civil Engineer  
 DATE: November 30, 2022

APPROVED BY:

SCALE 1:500

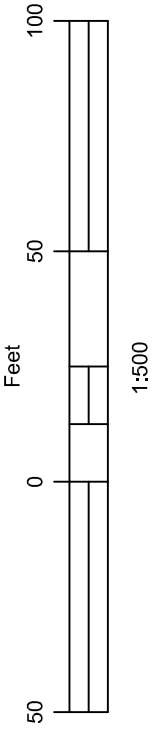
SHEET: 8 of 10





Notes:

- The dredge area involves an approximately 85x 155sized rectangle for the docking area with another 125x 26area for a channel for a total of 16425square feet. The cubic volume of the silt bottom dredge material is approximately 1,230cubic yds.
- Survey points are based on measurements taken JULY 17,2022
- Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov/>).
- Depth Table based on lake level of 264.64feet on July 17,2022



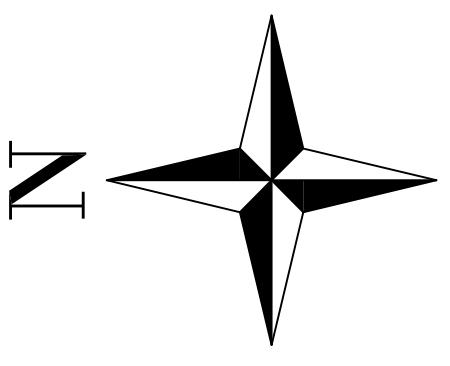
COORDINATE SYSTEM  
 EPSG-3558: NAD (83NSRS)/2007MAINE WEST

Point Number	Eastng	Northing	Elevation (m)	Elevation (ft)
243	869820.1484	121433.7757	78.834	258.64
244	869844.7766	121398.9281	78.834	258.64
245	869834.988	121412.7785	78.884	258.80
246	869852.244	121404.2056	78.883	258.80
247	869839.9299	121421.6294	78.883	258.80
248	869827.6158	121439.0532	78.883	258.80
249	869837.3093	121393.6656	78.986	259.14
250	869825.8621	121409.8478	78.986	259.14
251	869812.6811	121438.4982	78.986	259.14
252	869858.9814	121405.2348	79.717	261.54
253	869853.515	121412.9694	79.731	261.59
254	869849.2006	121419.0741	79.763	261.69
255	869844.2441	121426.0872	79.790	261.78
256	869837.8787	121435.0939	79.772	261.72
257	869831.7144	121443.816	79.805	261.83
258	869823.9001	121438.2934	79.825	261.89
259	869819.2688	121435.0202	79.773	261.72
260	869814.5728	121431.7013	79.782	261.75
261	869810.557	121428.8632	79.761	261.68
262	869814.5498	121423.2136	79.623	261.23
263	869821.7425	121413.0363	79.583	261.10
264	869826.2548	121406.6517	79.589	261.12
265	869831.1438	121399.7339	79.617	261.21
266	869833.2717	121396.7231	79.579	261.09
267	869846.5358	121396.439	79.707	261.51
268	869836.1366	121393.2303	78.986	259.14
269	869844.8558	121395.2517	78.986	259.14
270	869825.6825	121377.7459	78.986	259.14
271	869830.7352	121374.332	78.986	259.14
272	869814.4934	121361.1659	78.986	259.14
273	869819.5461	121357.7554	78.986	259.14
274	869817.0198	121359.4606	78.986	259.14
275	869835.3787	121393.7418	79.620	261.22
276	869846.9654	121396.7427	79.706	261.50
277	869824.9246	121378.2541	79.424	260.58
278	869831.4938	121373.82	79.453	260.67
279	869813.224	121360.9195	79.346	260.32
280	869816.5082	121358.7027	79.330	260.27
281	869819.7925	121356.4859	79.290	260.14
282	869825.4344	121426.2964	78.883	258.80
283	869829.1349	121421.0604	78.883	258.80
284	869840.6399	121404.7814	78.883	258.80
285	869846.8979	121411.77	78.883	258.80
286	869835.2634	121438.2321	78.883	258.80
287	869830.6666	121403.0488	78.986	259.14
288	869819.3898	121419.0058	78.986	259.14
289	869840.4962	121394.241	78.986	259.14
290	869834.4087	121385.2223	78.986	259.14
291	869828.2089	121376.0373	78.986	259.14
292	869821.4626	121366.0426	78.986	259.14
293	869817.0198	121359.4606	78.986	259.14
294	869831.8824	121386.9276	78.986	259.14
295	869836.935	121383.5171	78.986	259.14
296	869818.9362	121367.7479	78.986	259.14
297	869823.9889	121364.3374	78.986	259.14
298	869837.6929	121383.0055	79.608	261.18
299	869831.1245	121387.4391	79.524	260.91
300	869824.7468	121363.8258	79.377	260.42
301	869818.1783	121368.2594	79.299	260.17
302	869823.8821	121436.4144	78.883	258.80
303	869848.5103	121401.5669	78.883	258.80
304	869816.4148	121431.1369	78.935	258.97
305	869841.043	121396.2894	78.935	258.97
306	869815.4959	121424.5154	78.986	259.14
307	869821.7931	121415.6052	78.986	259.14
308	869828.2611	121406.4534	78.986	259.14
309	869835.036	121396.8672	78.986	259.14
310	869832.9835	121388.5589	78.986	259.14
311	869838.0361	121385.1483	78.986	259.14
312	869835.5098	121386.8536	78.986	259.14
313	869828.9527	121382.5873	78.986	259.14
314	869831.479	121380.882	78.986	259.14
315	869834.0054	121379.1767	78.986	259.14
316	869832.7256	121389.0704	79.557	261.01
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321	869824.7733	121370.9475	78.986	259.14
322	869827.2997	121369.2422	78.986	259.14
323	869821.4891	121373.1643	79.342	260.31
324	869828.0576	121368.7306	79.397	260.49
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326	869837.6134	121389.97	78.986	259.14
327	869841.2321	121389.8831	78.986	259.14
328	869832.909	121390.083	79.572	261.06
329	869842.3177	121389.857	79.690	261.45

# KETTLE COVE

## Dredging Layout Detail

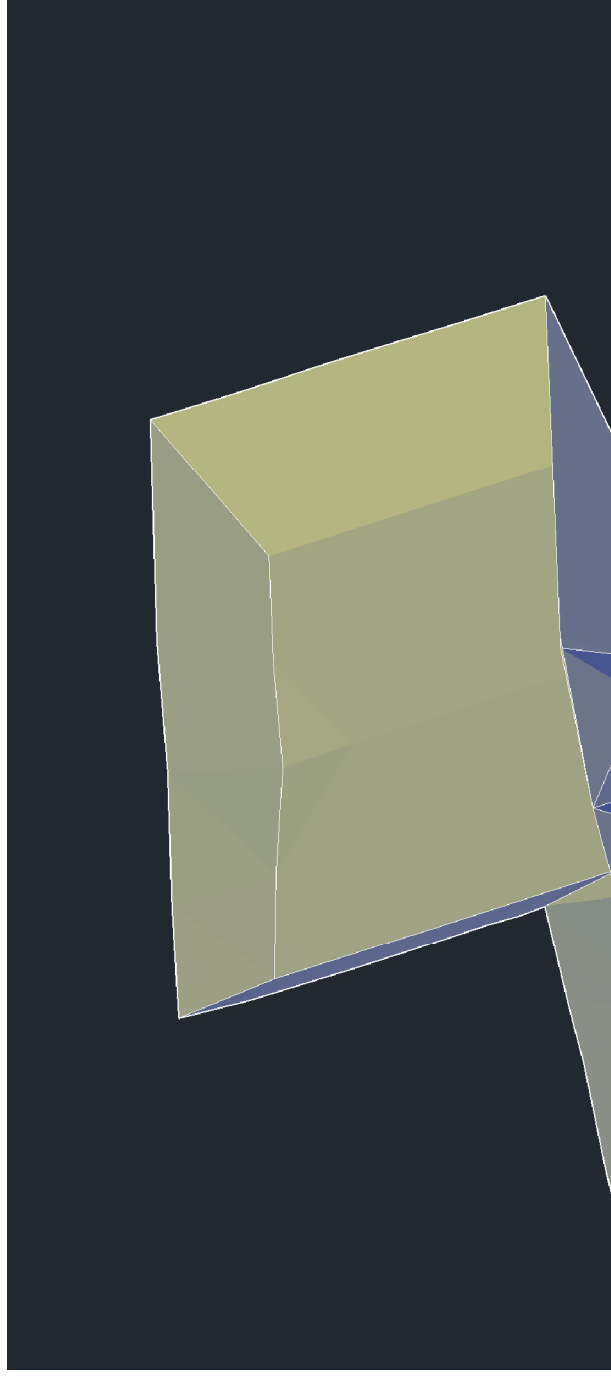
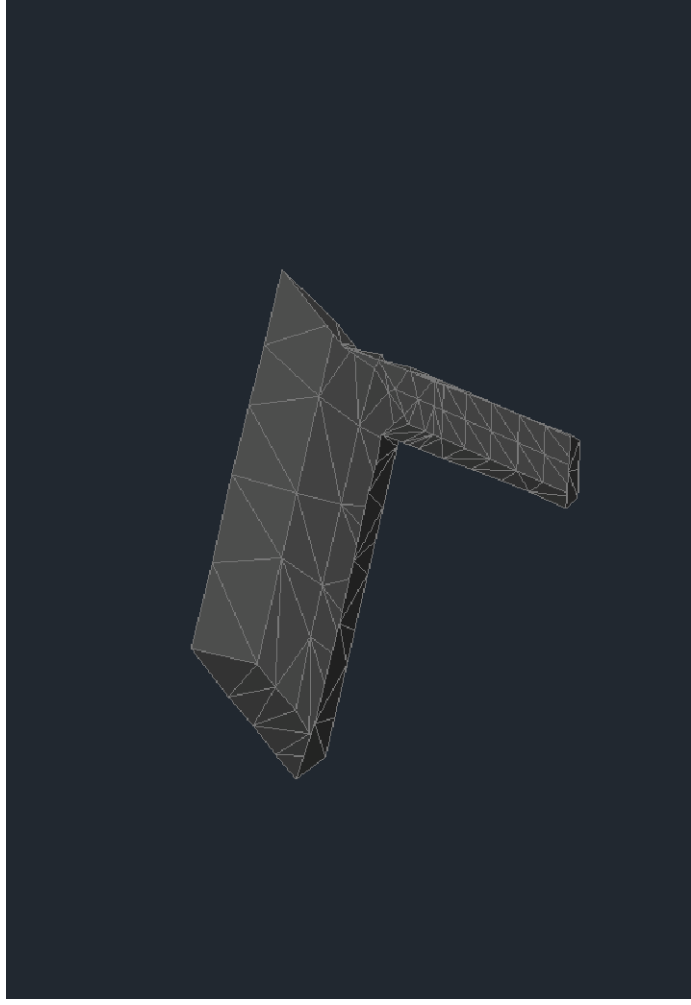
Highlights the GPS coordinates and elevations of the dredging borders and associated the slope points.



LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)  
 COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan  
 PURPOSE: Increase boating and water access.  
 APPLICATION BY: Kettle Cove Owner's Association (KCOA)  
 DESIGNED BY: Mahmoud Hammad, Civil Engineer  
 DATE: November 30,2022

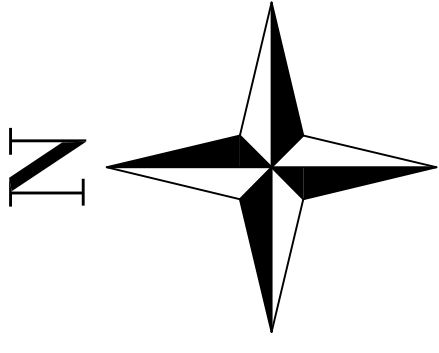
APPROVED BY:  
 SCALE 1:500  
 SHEET: 9 of 10



# KETTLE COVE

## Dredging Slope

Displays the slope perspective of the dredging project.



LOCATION: Northeastly part of Kettle Cove, Casco, ME (Near Leander Lane)

COUNTY: Cumberland, ME

PROJECT NAME: KCOA Dredging Plan  
PURPOSE: Increase boating and water access.

APPLICATION BY: Kettle Cove Owner's Association (KCOA)

DESIGNED BY: Mahmoud Hammad, Civil Engineer

DATE: November 30, 2022

APPROVED BY:

The dredge area involves an approximately 85x 155sized rectangle for the docking area with another 125x 26area for a channel for a total of 16,425square feet. The cubic volume of the silt bottom dredge material is approximately 1,230cubic yds.

### Notes:

- Survey points are based on measurements taken JULY 17, 2022
- Water levels are based on measurements from USGS 01063995 Sebago Lake near North Windham, Maine (<https://waterdata.usgs.gov>).
- Depth Table based on lake level of 264.64feet on July 17, 2022

SCALE ----

SHEET: 10 of 10