

# MEMO

**From:** Bud Brown, President. ECO-ANALYSTS, INC.  
**To:** Peter Tischbein, USACE  
**cc:** Jay Clement, USACE  
Norm Farris, USACE  
Ruthann Brien, USACE  
Dawn Hallowell, MEDEP  
Bill Morong, Yachting Solutions  
Mike Sabatini, Landmark Corporation  
Justin Davis, ATM  
**Date:** March 2, 2020  
**RE:** Revised Plans for Dredging at the Yachting Solutions Site in Rockland Harbor, Maine and Sample Analysis Plan Request.

Good Morning Pete,

Yachting Solutions has revised their Project from the original proposal to a dramatically reduced footprint for dredging. A number of Exhibits follow in order:

1. The Original Plan
2. The Revised Plan
3. A Summary of the Original Areas and Volumes
4. The Revised Areas and Volumes
5. A Comparison of the Original to the Revised Areas and Volumes.
6. A Comparison of Adjacent Yachting Solutions Bulk Chemistry Sample Sites Results to the RDS Reference Site
7. Text from Norm's Transmittal email for #6 above.

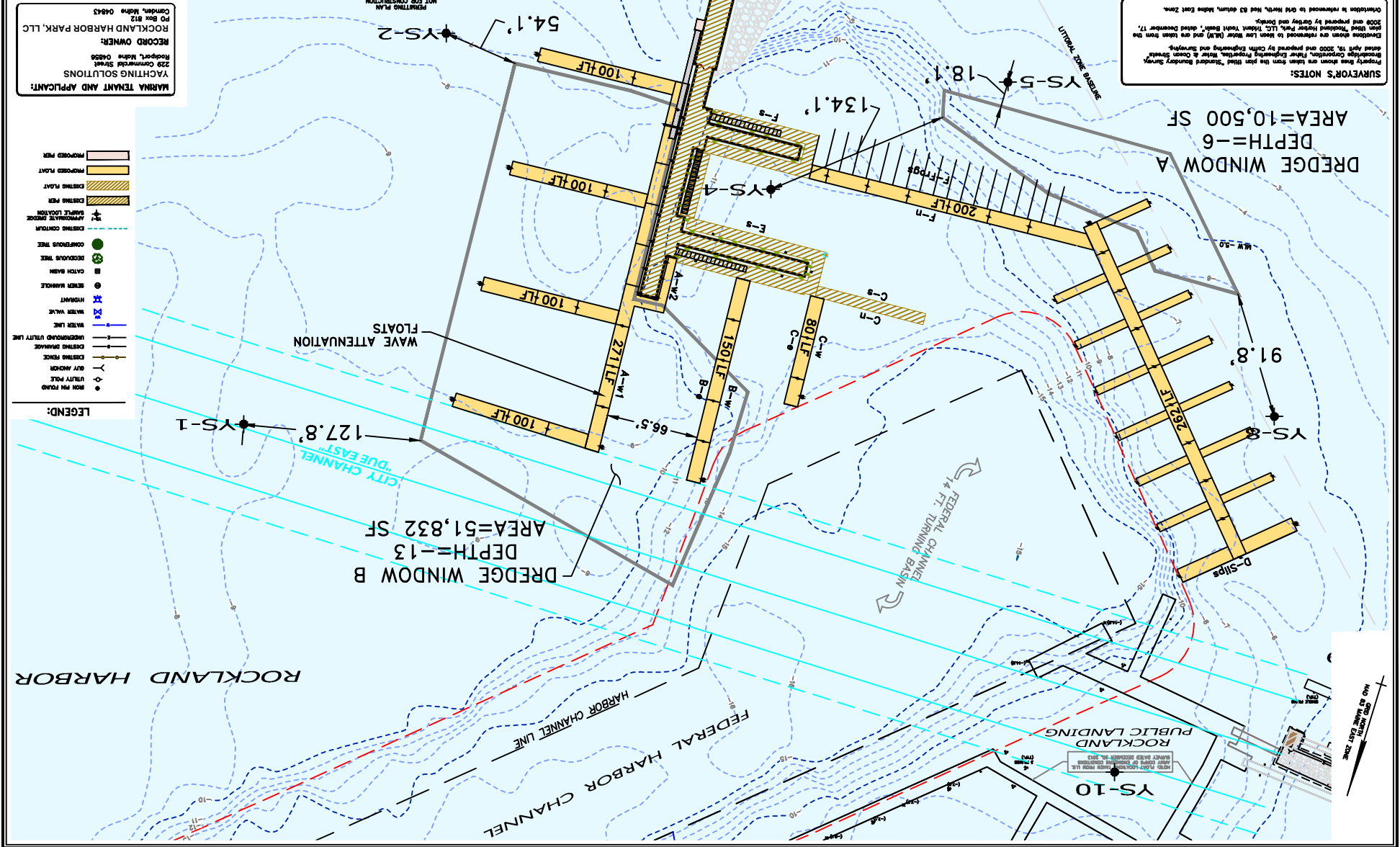
As shown, the Project's Area has been reduced by 82.4% and the Volumes by 90.2%. The adjacent Sample Sites from the Bulk Chemistry SAP are shown, including distances from them to the two new dredge windows. I'd like to have one of two options for additional sampling:

1. Bulk Chemistry Sample Sites within the new Dredge Windows, or
2. Composite Biological Testing Sites within the new Dredge Windows.

If you need any additional information, please let me know. Thanks.



**SURVEYOR'S NOTES:**  
 Property lines shown are taken from the plan titled "Standard Boundary Survey, Boundary Corporation, Fisher Engineering Properties, Water & Ocean Street" dated April 19, 2008 and prepared by Colin Engineering and Surveying.  
 Elevation shown are referenced to Mean Low Water (MLW) and are taken from the 2008 and prepared by Garby and Burby.  
 Orientation is referenced to Old North, Head 83 datum, Maine Coast Zone.



**MARINA TENANT AND APPLICANTS:**  
 YACHTING SOLUTIONS  
 229 Commercial Street  
 Rockport, Maine 04856  
**RECORD OWNER:**  
 ROCKLAND HARBOR PARK, LLC  
 P.O. Box 812  
 Camden, Maine 04843

ROCKLAND HARBOR

100' BUFFER ZONE  
 AND 50' WAVE FLAT ZONE

## Summary of Dredge Area and Volumes in Rockland Harbor

	----- Area -----		Volume (cu. yd.)
	(sq. ft.)	(acres)	
<b>- 5 Foot Depth</b>	36,078	0.8	4,708
<b>-10 Foot Depth</b>	180,284	4.1	44,533
<b>-15 Foot Depth</b>	382,833	8.8	113,414
<b>Totals</b>			
	<b>599,195</b>	<b>13.76</b>	<b>162,655</b>

## Yachting Solutions Dredge Areas & Volumes January 28, 2020

### Rockland Harbor

#### Area A (-6 feet)

Contour (ft)	Area (sq. ft.)	Depth (ft)	Volume (cf)	Volume (cy)
-3.5 to -4	2,092	2.25	4,707	174
-4 to -5	3,264	1.5	4,896	181
-5 to -6	5,144	0.5	2,572	95
Overdig	10,500	1.0	10,500	389
<b>Total</b>	<b>10,500</b>		<b>22,675</b>	<b>840</b>

#### Area B (-13 feet)

Contour (ft)	Area (sq. ft.)	Depth (ft)	Volume (cf)	Volume (cy)
-6.5 to -7	600	6.25	3,750	139
-7 to -8	6,981	5.5	38,396	1,422
-8 to -9	28,595	4.5	128,678	4,766
-9 to -10	9,614	3.5	33,649	1,246
-10 to -11	2,194	2.5	5,485	203
-11 to -12	2,144	1.5	3,216	119
-12 to -13	1,697	0.5	849	31
Overdig	51,825	1.0	51,825	1,919
<b>Total</b>	<b>51,825</b>		<b>265,847</b>	<b>9,846</b>
<b>Total</b>	<b>62,325</b>			<b>10,686</b>

## Yachting Solutions Dredging Area and Volume Comparison

Plan	Area (sq. ft.)	Area (ac.)	Volume (cu. yd.)
<b>Original</b>	599,195	13.8	162,655
<b>Revised</b>	105,261	2.4	15,907
<b>Change</b>	-493,934	-11.3	-146,748
<b>Percent Change</b>	<b>-82.4%</b>	<b>-82.4%</b>	<b>-90.2%</b>

## Comparison of Yachting Solutions Bulk Chemistry Results to the RDS Reference Site

	----- Sample Site -----					ERL	ERM	Unit	
	RDS								
Metals (ppm)	Mean + 2 sd	Raw Data	Raw Data	Raw Data	Raw Data	Raw Data			
Arsenic	16.9	19.3	18.4	18	14.4	9.48	8.2	70	mg/kg
Cadmium	0.4	0.12	0.094	0.56	0.59	0.51	1.2	9.6	mg/kg
Chromium	45.4	50.9	48.8	52.3		30.5	81	370	mg/kg
Copper	15.9	30.2	28	56.6	47.3	38.5	34	270	mg/kg
Mercury	31.5	0.028	0.011	0.212	0.257	0.176	0.15	0.71	mg/kg
Nickel	0.1	51.1	51.3	37.2	27.5	15.3	20.9	51.6	mg/kg
Lead	33.2	18.3	14.5	52.9	58.9	58.7	46.7	218	mg/kg
Zinc	128.5	106	84	165	168	195	150	410	mg/kg

### PAHs (ppb)

Fluorene	15.5	19	85	36	71	188			
Phenanthrene	34.4	181	671	354	695	1720			
Anthracene	20.3	50	180	89	169	407			
Naphthalene	7.1	9	30	17	28	73			
Acenaphthylene	10.9		17	39	87	215			
Acenaphthene	12.6	8	60	15	25	80			
<b>Low molecular wtg PAHs</b>		<b>280</b>	<b>1043</b>	<b>550</b>	<b>1075</b>	<b>2683</b>	<b>552</b>	<b>3160</b>	<b>µg/kg</b>
Fluoranthene	55.1	203	648	478	1030	2450			
Pyrene	58.1	202	583	492	1060	2960			
Benzo(a)anthracene	30.6	142	330	337	670	1530			
Chrysene	37.8	115	255	288	604	1310			
Total Benzofluoranthenes	97.9	156	377	524	1186	2038			
Benzo(a)pyrene	46.2	101	229	277	557	1190			
Dibenzo(a,h)anthracene	12.6	24	79	51	90	309			
Benzo(g,h,i)perylene	28	47	164	91	156	940			
Ideno(123-cd)pyrene	28.7	47	175	98	167	912			
<b>High molecular wtg PAHs</b>		<b>1037</b>	<b>2840</b>	<b>2636</b>	<b>5520</b>	<b>13639</b>	<b>1700</b>	<b>9600</b>	<b>µg/kg</b>

<b>Sum of PAH's</b>	<b>495.8</b>	<b>1597</b>	<b>4926</b>	<b>3736</b>	<b>7670</b>
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<b>TOC (%)</b>	<b>1.76</b>	<b>3.215</b>	<b>3.215</b>	<b>3.215</b>	<b>3.215</b>	<b>3.215</b>
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Cores highlighted in yellow exceed ERM

CLASSIFICATION: UNCLASSIFIED

So, I have been looking at the data I see that this project is falling into option 2 - needs biological testing (see attached spreadsheet. The contaminants in yellow show were the project materials exceeded for the ERM. The values in pink are between the ERL and ERM. When multiple contaminants fall between the two values we usually have reason to believe that the material will need biological testing as well. Sorry for the bad news. I think I can send you a modified SAP for biological sampling. I expect to consolidate the samples for the purposes of biological sampling.

BTW, I also looked at the data from the Rockland Fish Pier and the samples from the Yachting Solution meet or exceed many of the contaminants measured at the Fish Pier.

Regards,  
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Regulatory Dredging Liaison  
US Army Corps of Engineers  
Regulatory Department  
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