

NELHA Water Quality Laboratory

Coastal Site C24

10/6/1989 - 12/31/2025

Site	Date (M/D/Y)	Time -2400	Tide (m) (cycle)	PO ₄ ³⁻ (μM) (μg P/L)	NO ₃ ⁻ & NO ₂ ⁻ (μM) (μg N/L)	NH ₄ ⁺ & NH ₃ (μM) (μg N/L)	Si (μM) (μg Si/L)	TDP (μM) (μg P/L)	TDN (μM) (μg N/L)	Turbidity (NTU)	Salinity (PSU)	Chloride (mg/L)	Temp. (°C)	pH (unit)	DO (ppm)	Chl a (μg/L)	ORP (mV)
C24	10/6/89	825	1.7 Ebb	1.87 58	4.43 62	0.28 3.9	327 9184				22.80	12623	26.1	8.20	7.10		
C24	11/7/89	1330	0.8 Ebb	3.68 114	88.8 1244	0.16 2.2	651 18284	3.75 116	92.4 1294		11.92	6599	22.5	8.15	6.89		
C24	12/4/89	1057	0.9 Ebb	3.30 102	89.3 1251	0.07 1.0	663 18621	3.49 108	22.2 311	0.56	9.75	5396	22.4	8.11	7.97		
C24	1/29/90	1115	0.3 Ebb	3.40 105	76.3 1069	0.16 2.2	687 19295	3.50 108	79.3 1111	12.57	9.97	5519	21.2	8.09	7.40		
C24	2/7/90	1305	0.4 Flood	3.40 105	80.8 1132	1.55 21.7	519 14576	3.55 110	83.1 1165	0.00	10.33	5717	21.1	8.12	7.39		
C24	3/12/90	1350	0.5 Flood	2.18 68	54.8 768	0.07 1.0	187 5244	2.39 74	57.1 800	1.33	17.48	9676	22.0	8.18	7.75		
C24	4/3/90	1115	0.5 Flood	3.45 107	93.8 1314	0.07 1.0	660 18536	3.53 109	100 1401	1.06	8.58	4751	21.0	8.01	7.52		
C24	5/8/90	1045	0.3 Flood	2.82 87	86.7 1214	0.07 1.0	629 17666	3.03 94	94.7 1326	1.00	10.13	5607	22.3	8.02	7.29		
C24	5/30/90	1415	0.7 Low	2.89 90	84.2 1179	0.07 1.0	635 17834	3.12 97	92.9 1301	0.02	10.46	5791	21.1	8.01	7.12		
C24	7/9/90	930	0.6 Ebb	2.88 89	76.0 1065	0.07 1.0	365 10251	4.44 138	96.0 1345	0.11	10.03	5554	21.4	8.03	7.27		
C24	8/1/90	1045	1.4 Flood	2.49 77	59.5 833	0.07 1.0	512 14380	2.49 77	63.3 887	0.62	16.87	9339	24.2	8.29	7.80		
C24	9/11/90	1045	2.0 High	0.27 8	1.06 15	0.37 5.2	16.2 455	0.93 29	6.35 89	1.96	34.25	18960	27.9	8.34	6.89		
C24	10/2/90	1120	0.8 Flood	2.30 71	58.5 819	0.07 1.0	620 17415	2.76 85	66.0 925	0.82	16.55	9161	24.1	8.28	7.23		
C24	11/7/90	935	1.8 Ebb	0.72 22	30.9 433	0.20 2.8	242 6805	1.38 43	41.5 581	1.14	25.02	13851	25.5	8.24	6.61		
C24	12/4/90	1130	0.6 Ebb	2.47 77	70.5 987	0.22 3.1	924 25951	2.85 88	72.7 1018	0.61	14.11	7808	21.3	8.02	6.60		
C24	1/8/91	1015	0.9 Ebb	2.91 90	95.1 1332	0.05 0.7	631 17722	3.16 98	99.2 1389	1.26	8.81	4874	21.0	8.04	7.50		
C24	2/12/91	1045	0.2 Low	2.00 62	82.0 1149	0.07 1.0	367 10293	2.05 63	84.5 1184	0.97	9.48	5245	21.6	8.16	7.44		
C24	3/12/91	1049	0.4 Flood	0.77 24	13.7 192	0.33 4.6	124 3485	0.96 30	17.3 242	0.73	30.21	16722	24.5	8.28	7.69	0.08	
C24	4/9/91	1114	0.6 Flood	3.09 96	77.8 1090	0.07 1.0	765 21485	3.13 97	82.4 1154	0.00	10.63	5881	20.9	7.97	7.02		
C24	5/14/91	1023	-0.4 Low	2.63 81	74.6 1045	0.07 1.0	534 14998	3.09 96	83.8 1174	0.20	10.10	5591	21.1	8.03	7.45	0.04	
C24	6/3/91	1252	0.4 Low	2.79 86	81.6 1143	0.07 1.0	641 18008	3.18 98	90.1 1262	0.27	9.13	5053	21.5	8.07	7.39	0.03	
C24	7/8/91	1059	1.2 Flood	0.80 25	23.3 326	0.40 5.6	98.0 2752	1.01 31	26.0 364	0.40	27.28	15100	25.6	8.36	8.53	0.03	
C24	8/7/91	919	0.2 Flood	2.40 74	49.0 686	0.07 1.0	440 12358	2.48 77	54.7 766	0.11	9.90	5481	21.3	7.99	6.92	0.06	
C24	9/4/91	1046	1.5 Flood	0.92 28	24.7 346	0.93 13.0	233 6544	1.13 35	29.3 410	0.22	26.73	14798	26.0	8.32	8.55	0.09	
C24	10/7/91	1151	0.5 Low	2.80 87	89.2 1249	0.02 0.3	579 16262	2.84 88	91.7 1284	0.14	11.77	6517	21.4	7.95	7.15	0.06	
C24	11/5/91	1006	0.5 Low	2.12 66	83.6 1171	0.07 1.0	535 15026	2.14 66	84.7 1186	0.71	13.26	7341	22.4	8.12	7.39	0.03	
C24	12/2/91	1020	0.6 Low	1.82 56	77.1 1080	0.07 1.0	481 13509	1.95 60	80.4 1126	0.71	14.81	8196	22.7	8.16	7.54	0.29	
C24	1/6/92	1017	0.6 Ebb	2.39 74	95.1 1332	0.07 1.0	451 12667	2.39 74	99.2 1389	0.28	12.62	6987	21.2	8.04	7.12	0.07	
C24	2/24/92	1232	0.3 Ebb	0.53 16	34.7 486	0.17 2.4	216 6066	0.68 21	38.1 534	1.01	25.61	14174	24.4	8.32	7.49	0.19	
C24	3/23/92	1100	0.2 Ebb	3.12 97	73.4 1028	0.04 0.6	742 20839	3.31 103	97.7 1369	0.23	9.69	5365	21.1	8.05	7.68	0.20	
C24	4/20/92	1022	-0.1 Low	2.69 83	45.8 642	0.11 1.5	864 24266	2.79 86	101 1421	0.42	10.04	5556	21.3	8.05	7.66	0.07	
C24	5/18/92	1206	0.2 Flood	2.74 85	87.5 1225	0.23 3.2	779 21879	2.78 86	88.5 1240	0.50	12.21	6759	22.4	8.11	8.09	0.19	
C24	6/16/92	1231	0.4 Flood	2.68 83	93.5 1310	0.02 0.3	648 18199	2.78 86	94.0 1316	0.22	10.74	5945	22.0	8.08	7.93	0.16	
C24	7/22/92	1102	1.5 High	1.55 48	48.6 680	0.84 11.8	393 11038	1.72 53	53.5 749	2.47	21.99	12174	25.4	8.28	8.05	0.13	
C24	8/17/92	940	1.1 Ebb	3.09 96	44.8 628	0.07 1.0	190 5336	3.09 96	76.3 1068	0.20	10.74	5944	21.8	8.00	7.66	0.03	
C24	9/8/92	1059	1.0 Flood	0.66 20	1.08 15	0.66 9.2	11.0 309	0.75 23	7.49 105	0.24	18.51	10246	24.3	8.25	8.44	0.21	
C24	10/19/92	1057	2.0 High	1.98 61	63.3 886	0.62 8.7	73.7 2070	2.35 73	63.6 891	2.60	34.32	18995	28.8	8.31	7.47	0.08	

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C24	11/23/92	1124	0.4 Low	1.88 58	22.2 312	0.38 5.3	35.4 995	2.56 79	65.9 923	0.94	18.37	10166	23.7	8.24	7.86	0.06	
C24	12/21/92	1055	0.4 Low	2.17 67	63.2 885	0.34 4.8	649 18227	3.28 102	72.0 1008	1.02	15.89	8793	22.5	8.23	8.02	0.10	
C24	1/19/93	1016	0.3 Low	2.47 77	94.7 1327	0.54 7.6	221 6204	2.61 81	105 1466	1.02	11.16	6175	21.4	8.13	7.73	0.00	
C24	2/17/93	1041	0.3 Low	0.63 20	39.4 552	0.33 4.6	435 12217	0.63 20	41.0 575	0.19	24.36	13486	23.5	8.33	7.89	0.08	
C24	3/22/93	952	0.0 Low	2.16 67	96.8 1356	0.03 0.4	631 17719	2.17 67	217 3044	0.50	10.36	5733	21.3	8.16	7.81	0.13	
C24	4/19/93	1040	0.3 Flood	1.62 50	71.1 995	0.25 3.5	566 15888	1.86 58	72.7 1019	0.33	16.10	8913	22.7	8.30	8.70	0.20	
C24	5/17/93	939	0.3 Flood	1.83 57	74.5 1043	0.31 4.3	593 16649	2.13 66	81.4 1141	0.22	14.75	8164	22.0	8.22	8.22	0.08	
C24	6/14/93	1013	1.0 Flood	0.69 21	15.6 219	0.60 8.4	109 3050	0.81 25	18.7 262		30.09	16656	25.9	8.33	7.97	0.36	
C24	8/17/93	1040	0.2 Flood	2.78 86	92.2 1291	0.15 2.1	237 6659	2.78 86	98.4 1379	0.54	11.37	6296	22.0	8.10	7.76	0.15	
C24	12/21/93	1102	1.0 Ebb	0.46 14	33.7 471	0.44 6.2	204 5734	0.62 19	39.6 554	0.12	25.96	14367	24.0	8.24	7.70	0.11	
C24	2/23/94	1117	0.3 Flood	1.73 54	55.4 776	0.33 4.6	389 10925	1.93 60	85.9 1204	0.51	18.72	10361	22.9	8.26	7.88	0.09	
C24	5/24/94	1028	-0.2 Flood	2.02 63	69.7 976	0.33 4.6	460 12917	2.05 63	73.9 1035	0.29	17.08	9453	23.1	8.26	8.64	0.27	
C24	7/25/94	1120	0.3 Low	2.74 85	51.4 719	0.43 6.0	105 2939	2.66 82	103 1439	0.29	11.74	6500	22.5	8.11	7.92	0.00	
C24	10/18/94	1116	0.6 Low	2.78 86	90.2 1264	0.09 1.3	593 16649	2.75 85	88.9 1245	0.50	11.86	6567	22.3	8.13	8.29	0.18	
C24	2/21/95	1137	0.5 Ebb	2.68 83	91.7 1284	0.20 2.8	712 19988	2.68 83	97.7 1369	0.10	10.97	6069	21.5	8.13	7.96	0.11	
C24	4/19/95	1125	0.1 Low	2.67 83	93.3 1307	0.49 6.9	707 19856	2.66 82	100 1403	0.24	10.93	6052	22.0	8.15	8.02	0.13	
C24	8/8/95	1146	1.1 Flood	0.42 13	4.60 64	0.92 12.9	53.7 1507	0.63 20	11.6 162	0.66	32.63	18059	27.4	8.35	8.04	0.22	
C24	10/23/95	1027	0.3 Low	2.86 89	90.0 1260	0.64 9.0	58.6 1646	2.87 89	99.6 1395	0.19	11.81	6534	21.9	8.08	7.80	0.29	
C24	3/6/96	1115	0.0 Low	1.84 57	95.1 1332	0.36 5.0	600 16851	2.00 62	93.3 1307	0.20	10.13	5605	22.0	8.17	7.61	0.05	
C24	5/7/96	1129	0.0 Low	3.13 97	95.9 1343	0.23 3.2	614 17250	3.10 96	102 1426	0.64	10.52	5821	22.4	8.01	7.56	0.05	
C24	8/21/96	1110	1.6 Ebb	1.03 32	36.5 511	1.27 17.8	225 6313	1.18 37	39.7 556	0.34	25.56	14150	27.6	8.30	7.93	0.17	
C24	10/7/96	1116	1.6 Flood	0.15 5	0.80 11	1.00 14.0	22.5 633	0.37 11	7.29 102	0.22	34.24	18955	29.0	8.34	7.43	0.24	
C24	1/8/97	1045	0.1 Low	2.15 67	70.0 980	0.22 3.1	469 13178	2.19 68	76.0 1064	0.54	13.40	7416	22.6	8.21	7.78	0.42	
C24	4/29/97	1051	0.6 High	2.55 79	42.1 590	0.78 10.9	307 8619	2.70 84	39.9 559	0.22	23.62	13076	24.8	8.35	7.90	0.10	
C24	8/20/97	1147	0.2 Low	2.67 83	93.7 1313	0.75 10.5	552 15503	2.70 84	104 1460	1.21	11.78	6518	22.5	8.29	7.82	0.16	
C24	10/8/97	1028	1.8 Ebb	0.92 28	30.4 426	0.72 10.1	193 5421	1.11 34	33.3 466	0.15	27.08	14992	26.9	8.50	7.54	0.26	
C24	3/2/98	1131	0.3 Ebb	2.84 88	103 1447	0.29 4.1	643 18051	3.02 94	110 1535	0.27	10.40	5756	21.5	8.26	7.75	0.00	
C24	5/6/98	1118	0.6 Flood	2.52 78	83.6 1171	0.51 7.1	489 13742	2.59 80	87.7 1228	0.14	14.95	8274	21.7	8.21	8.30	0.10	
C24	7/8/98	1141	0.9 Flood	2.21 68	69.8 978	0.82 11.5	442 12411	2.22 69	78.6 1101	0.25	17.49	9682	23.7	8.28	8.91	0.14	
C24	10/7/98	1045	0.4 Ebb	2.81 87	99.7 1397	0.42 5.9	559 15711	2.92 90	104 1453	0.15	12.88	7127	22.8	8.04	7.87	0.11	
C24	1/20/99	1110	0.6 Ebb	1.80 56	86.9 1217	0.26 3.6	462 12978	1.89 59	87.4 1224	0.31	15.98	8844	22.5	8.16	7.80	0.12	
C24	4/7/99	1142	0.4 Ebb	1.36 42	75.8 1062	0.31 4.3	378 10628	1.46 45	78.3 1097	0.29	18.26	10110	23.1	8.30	8.54	0.24	
C24	7/12/99	1035	0.2 Flood	2.94 91	105 1476	0.46 6.4	598 16781	3.01 93	110 1534	0.31	11.15	6172	21.9	8.05	7.83	0.24	
C24	10/11/99	1103	0.5 Low	2.28 71	96.6 1353	0.43 6.0	557 15644	2.46 76	103 1443	0.27	12.32	6817	22.2	8.17	8.02	0.20	
C24	3/20/00	1130	0.0 Flood	2.54 79	22.0 308	0.33 4.6	547 15368	2.30 71	112 1572	0.27	11.29	6252	21.5	8.13	7.97	0.30	
C24	4/18/00	1127	0.2 Flood	2.86 89	98.6 1381	0.43 6.0	559 15694	2.30 71	105 1466	0.23	12.44	6888	23.4	8.17	8.22	0.20	
C24	8/2/00	1048	0.2 Low	2.83 88	81.8 1146	0.24 3.4	560 15731	2.95 91	90.8 1272	0.27	13.00	7197	21.6	7.97	7.08	0.13	

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C24	10/23/00	1126	1.7 Flood	0.21 7	0.77 11	0.52 7.3	37.6 1056	0.48 15	7.04 99	0.20	34.54	19119	26.9	8.36	7.54	0.26	
C24	1/23/01	1118	0.3 Low	2.43 75	95.7 1340	0.32 4.5	572 16073	2.45 76	101 1408	0.26	12.39	6858	25.2	8.13	7.47	0.13	
C24	4/16/01	1105	0.5 Flood	2.25 70	50.3 705	0.33 4.6	503 14119	2.48 77	89.1 1248	0.09	14.97	8286	22.9	8.20	8.54	0.18	
C24	9/12/01	1125	2.1 Flood	0.14 4	0.38 5	0.35 4.9	14.6 411	0.30 9	6.25 88	0.25	34.76	19240	28.2	8.30	7.65	0.42	
C24	10/23/01	1135	1.7 Ebb	1.53 47	56.6 793	0.58 8.1	334 9383	1.63 50	58.3 817	0.11	22.07	12216	25.0	8.23	8.08	0.32	
C24	1/14/02	1153	0.2 Low	2.46 76	96.7 1354	0.20 2.8	587 16492	2.28 71	88.2 1236	0.23	11.97	6626	21.8	8.05	6.40	0.06	
C24	5/20/02	1150	0.9 High	1.74 54	67.3 943	0.70 9.8	412 11580	1.88 58	60.2 843	0.13	18.95	10489	24.1	8.25	8.66	0.16	
C24	8/19/02	1153	1.7 Flood	0.28 9	2.63 37	0.47 6.6	29.2 820	0.52 16	8.68 122	0.14	33.75	18679	27.9	8.32	7.76	0.10	
C24	10/10/02	1134	1.1 Ebb	2.20 68	77.9 1091	0.77 10.8	475 13327	2.39 74	78.0 1093	0.36	16.24	8989	23.8	8.15	7.52	0.13	
C24	3/17/03	1112	-0.1 Flood	2.12 66	93.6 1311	0.60 8.4	562 15778	2.24 69	109 1527	0.60	12.34	6831	22.6	8.18	8.17	0.50	
C24	4/24/03	1142	0.5 Flood	2.16 67	92.6 1297	0.75 10.5	517 14520	2.28 71	99.7 1396	0.18	14.61	8089	23.2	8.30	8.54	0.09	
C24	8/25/03	1050	0.9 Flood	2.05 63	78.3 1097	0.75 10.5	467 13102	2.15 67	107 1496	0.20	17.02	9420	24.0	8.25	8.77	0.41	
C24	10/27/03	1208	0.4 Ebb	2.41 75	50.4 706	0.54 7.6	278 7819	2.71 84	72.7 1018	0.23	13.68	7571	23.3	8.10		0.14	
C24	12/5/03	1052	0.8 Flood												8.12		
C24	2/9/04	1155	0.0 Ebb	2.52 78	108 1511	0.24 3.4	584 16405	2.49 77	115 1611	0.52	12.08	6686	22.1	8.05	7.84	0.13	
C24	6/3/04	1145	0.1 Flood	1.67 52	65.6 919	0.94 13.2	367 10296	1.77 55	81.7 1145	0.54	19.45	10766	25.1	8.31	8.64	0.02	
C24	8/31/04	1106	0.2 Low	1.88 58	79.9 1119	0.58 8.1	423 11891	1.82 56	80.6 1129	0.19	17.30	9576	24.3	8.26	8.00	0.16	
C24	12/1/04	1032	1.6 Ebb	0.86 27	36.3 508	0.68 9.5	180 5044	1.08 33	43.7 612	0.26	26.98	14934	25.6	8.32	7.40	0.21	
C24	3/17/05	1112	0.3 Ebb	2.11 65	105 1468	0.53 7.4	566 15899	2.24 69	111 1548	0.14	11.33	6270	24.7	8.35	8.82	0.18	
C24	4/14/05	1154	0.2 Ebb	0.88 27	27.6 386	0.78 10.9	162 4553	1.08 33	33.1 463	0.31	28.20	15609	25.7	8.42	8.18	0.25	
C24	7/26/05	1132	1.1 Ebb	1.51 47	60.6 849	0.50 7.0	298 8375	1.59 49	76.4 1070	0.22	22.89	12669	25.6	8.34	7.93	0.06	
C24	8/8/05	926	0.7 Ebb								16.13	8927	22.7				
C24	10/31/05	1043	0.6 Flood	2.31 72	98.2 1375	0.93 13.0	454 12742	2.42 75	105 1471	0.25	13.37	7400	23.5	8.25	8.14	0.27	
C24	1/25/06	1126	0.4 Flood	2.51 78	115 1615	0.52 7.3	545 15307	2.53 78	110 1539	0.22			22.4	8.23	8.44	0.27	
C24	4/17/06	1115	-0.2 Low	2.73 85	124 1737	0.33 4.6	561 15756	2.94 91	121 1688	0.35	12.59	6969	24.9	8.13	8.37	0.30	
C24	7/26/06	1233	0.6 Flood	2.35 73	78.7 1102	0.88 12.3	430 12077	2.40 74	72.6 1016	0.97	18.43	10199	23.8	8.24	9.17	0.22	
C24	11/21/06	1123	0.4 Low	2.94 91	122 1709	0.44 6.2	543 15250	2.95 91	108 1517	0.22	13.48	7462	22.4	8.06	7.82	0.27	
C24	1/18/07	1201	0.2 Flood	1.56 48	80.0 1121	0.78 10.9	368 10335	1.64 51	81.6 1143	0.39	20.12	11136	23.8	8.32	8.64	0.26	
C24	6/25/07	1127	1.5 Flood	0.93 29	29.45 413	0.92 12.9	140 3931	1.95 60	31.01 434	0.29	28.73	15901	26.7	8.44	9.71	0.31	
C24	2/1/08	1334	0.5 High	3.0 93	107 1497	0.48 6.7	605 16989	2.5 77	102 1425	0.41	10.76	5956	21.7	7.99	8.30		
C24	2/20/09	1105	0.3 Flood	2.1 66	55.3 775	0.45 6.3	222 6239	2.4 74	131 1832	0.19	14.96	8281	22.5	8.00	7.63	0.02	
C24	3/30/09	1000	0.3 Ebb	2.0 63	93 1297	1.22 17.1	321 9028	3.4 104	97 1353	0.65	13.79	7633	22.4	7.78	6.62	0.05	
C24	4/27/09	1356	0.3 Flood	1.3 41	55 777	3.15 44.1	221 6199	1.9 58	80 1117	0.48	25.09	13888	25.0	8.42	6.21	0.05	
C24	5/14/09	946	0.4 Ebb	3.4 106	125 1747	1.02 14.3	504 14154	3.2 100	119 1671	0.34	13.45	7445	22.7	7.94	6.75	0.13	
C24	6/12/09	816	0.6 High	1.7 53	108 1513	0.99 13.9	408 11447	2.1 66	122 1705	0.34	15.76	8724	23.3	8.06	6.48	0.18	
C24	7/10/09	901	0.3 Ebb	2.5 76	84 1182	0.72 10.1	375 10536	6.3 196	87 1222	1.35	12.61	6980	22.3	8.01	6.54	0.09	
C24	8/27/09	822	1.8 High	3.2 100	139 1951	0.48 6.7	493 13854	3.2 98	140 1966	0.22	11.06	6122	22.3	8.16	6.11	0.08	

NELHA Water Quality Laboratory

Coastal Site C24

10/6/1989 - 12/31/2025

Site	Date (M/D/Y)	Time -2400	Tide (m) (cycle)	PO ₄ ³⁻ (μM) (μg P/L)	NO ₃ ⁻ & NO ₂ ⁻ (μM) (μg N/L)	NH ₄ ⁺ & NH ₃ (μM) (μg N/L)	Si (μM) (μg Si/L)	TDP (μM) (μg P/L)	TDN (μM) (μg N/L)	Turbidity (NTU)	Salinity (PSU)	Chloride (mg/L)	Temp. (°C)	pH (unit)	DO (ppm)	Chl a (μg/L)	ORP (mV)
C24	9/17/09	906	0.2 Flood	3.0 92	111 1559	0.49 6.8	384 10788	2.8 86	115 1615	0.29	12.24	6775	22.5	8.32	6.03	0.23	
C24	10/22/09	908	1.9 Ebb	1.6 50	63 885	2.41 33.7	120 3368	1.8 56	66 924	0.54	23.48	12997	23.8	7.96	6.42	1.57	
C24	11/19/09	1010	1.7 Ebb	3.0 94	115 1608	0.79 11.0	410 11515	2.9 91	116 1630	0.21	15.01	8308	22.4	7.89	5.62	0.51	
C24	12/7/09	754	2.0 High	0.3 8	1 10	1.07 15.0	24 688	0.5 15	9 133	0.24	34.89	19313	24.8	8.19	6.52	0.76	
C24	1/4/10	1343	0.0 Low	2.9 90	126 1768	0.49 6.9	505 14189	2.8 87	127 1784	0.50	13.38	7406	21.9	7.70	7.18	1.26	
C24	2/2/10	1329	-0.2 Low	2.5 78	130 1814	1.39 19.4	524 14707	2.4 75	130 1827	0.55	12.75	7057	21.9	7.79	6.91	0.55	
C24	3/10/10	1245	0.7 High	3.4 105	124 1736	0.19 2.7	417 11703	3.2 98	124 1740	0.44	12.51	6925	21.8	7.99	6.50	0.64	
C24	4/5/10	947	0.4 High	3.4 105	112.0 1568	0.69 9.6	564 15850	3.2 98	113 1578	0.11	13.18	7295	21.8	8.10	7.53	0.06	
C24	5/12/10	1224	1.5 Flood	1.1 34	37.7 528	2.82 39.5	200 5605	1.3 40	39 553	0.17	28.18	15598	26.1	8.20	6.40	0.07	
C24	6/21/10	959	1.3 Flood	0.6 18	13.0 182	0.89 12.4	84 2369	1.0 30	19 268	0.25	32.37	17918	25.7	8.29	7.58	0.45	
C24	7/12/10	951	-0.1 Low	3.9 119	157.2 2201	2.13 29.8	622 17471	3.6 113	158 2207	0.42	12.34	6831	22.6	7.94	6.07	0.08	
C24	8/2/10	1205	1.3 Ebb	1.7 53	69.1 967	0.84 11.7	326 9160	1.8 57	74 1041	0.91	22.24	12310	26.3	8.20	7.40	0.26	
C24	9/1/10	1038	1.8 Flood	0.4 12	8.4 117	0.88 12.3	68 1910	0.7 21	19 272	0.16	32.51	17995	27.2	8.31	8.25	0.18	
C24	10/19/10	1100	1.1 Flood	1.4 44	61.4 860	0.91 12.7	303 8510	1.6 49	64 896	0.20	22.71	12571	24.6	8.28	8.22	0.18	
C24	11/3/10	935	0.5 Low	2.2 69	100.7 1411	0.76 10.6	472 13259	2.3 71	107 1497	0.64	18.27	10113	23.4	8.16	7.45	0.12	
C24	12/6/10	918	0.8 Ebb	3.1 95	122.9 1722	0.64 8.9	587 16477	3.0 92	125 1758	0.06	13.57	7511	21.9	7.94	6.68	0.09	
C24	1/26/11	953	0.8 Ebb	0.2 6	0.9 13	0.31 4.3	11 313	0.6 19	7 99	0.46	34.53	19113	25.3	8.23	6.36	0.17	
C24	4/13/11	936	0.3 Flood	3.1 97	127.2 1781	0.40 5.6	587 16493	3.2 101	128 1791	0.48	12.30	6808	22.1	8.07	7.60	0.17	
C24	7/18/11	900	0.7 Ebb	3.2 99	116.2 1627	0.57 8.0	545 15293	3.2 99	120 1686	0.27	14.21	7866	21.9	7.89	7.23	0.12	
C24	10/5/11	936	1.4 Flood	0.1 4	0.6 9	1.57 22.0	9 248	0.5 15	5 68	0.07	35.02	19384	27.0	8.17	6.82	0.21	
C24	1/17/12	810	0.7 Flood	2.4 74	102.3 1433	0.49 6.9	455 12771	2.4 74	107 1494	0.23	18.18	10063	21.8	7.94	7.09	0.06	
C24	4/19/12	1028	0.3 Flood	3.2 100	133.2 1866	0.69 9.7	587 16487	3.2 99	136 1900	0.07	12.59	6969	21.7	7.97	7.23	0.02	
C24	7/1/12	1058	1.2 Ebb	2.9 88	122.6 1718	0.78 10.9	516 14484	2.8 87	122 1706	0.10	14.41	7976	22.4	8.03	8.01	0.03	
C24	10/8/12	1026	1.8 High	0.9 27	32.4 454	1.35 18.9	139 3917	1.3 39	39 542	0.20	30.33	16788	26.7	8.24	7.64	0.10	
C24	1/1/13	1028	1.2 Ebb	0.6 18	34.8 488	1.66 23.2	125 3498	0.9 28	40 563	0.09	29.65	16412	24.8	8.24	6.63	0.17	
C24	4/1/13	1008	0.4 Ebb	2.7 83	107.1 1500	0.69 9.6	421 11837	2.7 83	107 1501	1.26	16.97	9393	22.4	8.11	8.12	0.11	
C24	7/8/13	937	-0.1 Low	4.0 123	156.3 2189	1.27 17.8	575 16139	3.8 116	158 2212	0.84	12.82	7096	21.9	7.83	6.63	0.02	
C24	10/10/13	1036	1.8 Ebb	3.1 95	99.0 1386	0.74 10.4	433 12161	3.1 95	101 1411	0.13	19.78	10949	23.8	8.08	7.47	0.07	
C24	1/22/14	845	0.7 High	0.9 28	39.1 548	0.71 10.0	142 3989	1.1 35	45 624	0.02	29.72	16451	23.9	8.02	6.35	0.12	
C24	4/9/14	1024	0.7 Flood	3.1 96	133.9 1876	1.02 14.3	534 15012	2.9 91	142 1985	0.40	11.58	6410	22.6	7.92	7.25	0.06	
C24	7/16/14	1042	0.5 Ebb	2.2 69	107.1 1501	1.50 21.0	388 10899	2.2 68	105 1466	0.17	18.44	10207	24.5	8.05	7.29	0.25	
C24	10/15/14	1213	1.5 Ebb	2.1 66	86.6 1213	0.93 13.0	371 10431	2.2 68	91 1271	0.10	17.09	9460	25.0	8.17	7.49	0.06	
C24	2/3/15	900	0.5 Ebb	2.7 83	138.5 1940	1.01 14.2	549 15422	3.3 102	148 2079	0.35	12.29	6803	22.2	8.13	7.30	0.09	
C24	5/5/15	1552	2.0 High	0.3 10	0.7 10	1.78 24.9	6 177	1.0 32	10 134	0.35	34.37	19025	26.5	8.16	7.10	0.26	
C24	7/10/15	1035	1.4 Flood	0.8 24	7.8 109	1.41 19.8	60 1695	1.2 37	28 397	0.36	32.19	17818	27.8	8.16	8.00	0.18	
C24	11/5/15	946	1.3 Flood	0.6 20	25.1 351	0.48 6.7	99 2784	1.1 34	37 520	0.16	29.97	16589	27.3	8.24	7.55	0.37	
C24	1/19/16	1007	-0.2 Low	1.9 58	101.7 1424	0.49 6.9	335 9395	2.0 61	100 1400	0.28	20.07	11109	23.8	8.19	7.17	0.14	

NELHA Water Quality Laboratory

Coastal Site C24

10/6/1989 - 12/31/2025

Site	Date (M/D/Y)	Time -2400	Tide (m) (cycle)	PO ₄ ³⁻ (μM) (μg P/L)	NO ₃ ⁻ & NO ₂ ⁻ (μM) (μg N/L)	NH ₄ ⁺ & NH ₃ (μM) (μg N/L)	Si (μM) (μg Si/L)	TDP (μM) (μg P/L)	TDN (μM) (μg N/L)	Turbidity (NTU)	Salinity (PSU)	Chloride (mg/L)	Temp. (°C)	pH (unit)	DO (ppm)	Chl a (μg/L)	ORP (mV)
C24	4/12/16	1147	0.2 Ebb	3.4 104	112.6 1577	0.22 3.1	427 12001	3.3 103	111 1549	0.49	13.97	7733	22.7	8.06	6.94	0.25	
C24	7/14/16	1118	1.5 Flood	0.5 15	8.8 123	1.76 24.7	40 1110	0.7 21	17 234	0.41	32.98	18255	27.6	8.43	8.60	0.70	
C24	10/20/16	1037	1.1 Ebb	4.3 132	141.4 1981	1.01 14.1	575 16140	4.4 137	145 2033	0.16	21.92	12133	25.1	8.29	7.05	0.44	
C24	2/23/17	1045	0.5 Flood	2.8 86	108.5 1520	0.17 2.4	478 13420	2.9 89	120 1681	0.46	16.10	8912	22.6	8.00	7.50	0.01	
C24	4/10/17	1023	0.0 Flood	3.6 113	140.3 1966	0.24 3.4	558 15684	3.7 115	140 1963	0.18	12.04	6664	22.2	7.90	6.82	0.07	
C24	7/13/17	1049	0.2 Low	3.5 109	124.2 1740	0.31 4.3	534 14991	3.3 103	111 1557	0.69	13.80	7639	22.1	7.96	5.61	0.11	
C24	10/12/17	1026	2.0 High	0.2 7	0.5 7	1.03 14.4	7 203	0.5 14	3 49	0.29	34.75	19235	28.6	8.23	6.39	0.38	
C24	1/11/18	1016	1.0 Flood	0.1 3	1.9 26	0.46 6.4	15 433	0.4 12	5 70	0.18	34.27	18969	25.1	8.21	6.89	0.20	
C24	4/24/18	1027	0.8 Flood	1.1 34	36.7 513	2.33 32.7	175 4926	1.4 44	42 591	0.39	27.66	15311	24.7	8.22	7.34	0.32	
C24	7/12/18	954	-0.3 Low	2.6 80	100.7 1411	0.39 5.4	382 10739	2.7 83	106 1478	0.15	24.86	13761	24.7	8.20	7.73	0.34	
C24	10/11/18	948	0.6 Ebb	1.1 34	50.9 714	1.43 20.0	200 5604	1.3 39	54 750	0.37	26.30	14558	26.4	8.16	5.04	0.42	
C24	1/15/19	946	1.3 High	0.2 5	0.9 13	0.43 6.0	11 319	0.3 11	5 71	0.47	34.48	19086	24.3	8.15	6.18	0.39	
C24	4/25/19	924	0.5 Ebb	1.8 57	70.8 991	0.27 3.8	274 7699	1.9 60	75 1045	0.20	25.54	14137	24.8	8.15	7.89	0.42	
C24	7/17/19	937	-0.1 Low	2.2 67	97.9 1372	0.66 9.3	351 9869	2.2 68	95 1331	0.21	19.84	10982	25.1	8.16	6.61	0.31	
C24	10/8/19	1014	1.2 Flood	1.1 34	54.4 762	0.76 10.6	179 5035	1.3 40	57 792	0.28	27.91	15449	27.0	8.18	8.58	0.42	
C24	1/9/20	957	0.4 Low	3.2 100	132.3 1853	0.45 6.3	459 12884	3.0 92	132 1856	0.30	19.50	10794	23.0	7.98	6.55	0.13	
C24	5/21/20	1114	0.5 Flood	2.8 88	109.2 1530	0.57 8.0	423 11882	2.4 75	114 1594	0.28	18.64	10318	23.8	8.14	8.68	0.64	
C24	7/14/20	1022	0.4 Flood	1.8 56	52.7 738	0.56 7.9	219 6139	1.8 55	54 753	0.25	24.80	13727	25.5	8.19	9.29	0.55	
C24	10/14/20	952	0.2 Flood	3.2 99	109.1 1529	0.71 10.0	421 11827	2.8 88	109 1526	0.27	16.98	9399	23.1	8.06	8.39	0.80	
C24	1/14/21	927	0.9 Ebb	1.0 31	55.1 771	0.34 4.7	170 4767	1.2 38	58 811	0.59	29.74	16462	25.3	8.13	7.42	0.46	
C24	4/13/21	1001	-0.2 Low	2.5 76	113.3 1588	0.24 3.3	393 11024	2.5 79	111 1560	0.48	18.65	10323	23.9	8.13	9.74	0.46	
C24	7/1/21	1421	0.6 Low	0.2 6	1.3 19	0.74 10.4	12 338	0.2 6	10 142	1.06	34.33	19003	27.6	8.24	8.47	0.36	
C24	10/19/21	1320	1.5 Flood	2.3 71	91.8 1285	1.27 17.8	317 8890	2.4 74	92 1294	0.72	22.03	12194	25.0	8.14	9.78	1.51	
C24	2/3/22	1001	0.7 Ebb	1.3 40	81.3 1139	0.53 7.4	276 7756	1.3 41	91 1270	0.28	22.66	12543	24.1	8.11	7.95	0.44	
C24	4/12/22	1044	0.7 Flood	2.7 84	128.9 1805	0.61 8.5	441 12389	2.8 88	139 1948	0.31	16.46	9111	23.7	8.15	10.12	1.32	
C24	7/21/22	1045	1.5 High	1.1 35	71.5 1001	0.91 12.8	246 6913	1.2 36	75 1054	0.63	24.34	13473	25.3	8.19	8.95	0.84	
C24	10/12/22	946	0.2 Low	1.7 53	90.2 1263	0.50 7.0	302 8470	1.9 58	88 1233	0.41	21.67	11995	25.5	8.12	8.29	1.49	
C24	1/17/23	1001	1.0 High	0.2 7	6.5 91	0.90 12.6	34 967	0.3 9	13 181	0.27	33.43	18504	25.3	8.22	8.72	0.35	
C24	4/21/23	1015	-0.2 Flood	3.0 92	150.3 2106	0.31 4.3	503 14140	3.0 93	153 2140	1.26	12.96	7174	23.3	8.17	9.50	1.50	
C24	7/12/23	1548	1.4 Ebb	0.5 15	23.3 326	0.74 10.3	76 2148	0.6 18	35 490	1.35	31.38	17370	27.3	8.21	7.62	0.30	
C24	10/24/23	1537	1.5 Ebb	0.6 19	29.9 419	0.97 13.6	98 2753	0.8 24	37 525	0.75	30.49	16877	27.6	8.19	7.25	0.34	
C24	1/11/24	1432	1.0 High	1.0 30	84.6 1184	0.68 9.5	251 7036	1.0 31	89 1240	0.45	24.29	13445	24.6	8.26	8.66	0.43	136.2
C24	4/2/24	1458	0.1 Low	1.4 42	92.9 1301	0.55 7.7	299 8398	1.4 42	98 1374	0.95	20.97	11607	24.4	8.29	9.21	0.35	220.3
C24	7/24/24	955	0.1 Low	2.2 67	129.8 1818	0.39 5.4	411 11536	2.2 68	125 1755	0.31	15.72	8701	23.6	8.11	8.18	0.26	200.4
C24	10/4/24	1003	0.4 Low	2.9 88	137.0 1919	0.57 8.0	436 12254	2.8 86	139 1940	0.95	15.57	8618	23.3	8.03	8.01	0.65	298.9
C24	1/7/25	928	1.4 High	0.1 4	0.9 13	0.23 3.2	14 390	0.4 13	8 117	0.83	34.76	19241	25.7	7.10	7.01	0.32	246.2
C24	4/1/25	1046	-0.3 Low	3.2 98	164.4 2303	0.51 7.1	497 13970	2.9 88	163 2278	0.62	12.19	6747	23.4	8.04	8.34	0.54	240.3

NELHA Water Quality Laboratory

Coastal Site C24

10/6/1989 - 12/31/2025

Site	Date (M/D/Y)	Time -2400	Tide (m) (cycle)	PO ₄ ³⁻ (μM) (μg P/L)		NO ₃ ⁻ & NO ₂ ⁻ (μM) (μg N/L)		NH ₄ ⁺ & NH ₃ (μM) (μg N/L)		Si (μM) (μg Si/L)		TDP (μM) (μg P/L)		TDN (μM) (μg N/L)		Turbidity (NTU)	Salinity (PSU)	Chloride (mg/L)	Temp. (°C)	pH (unit)	DO (ppm)	Chl a (μg/L)	ORP (mV)
C24	7/23/25	1515	0.8 High	0.2	5	1.0	14	1.17	16.4	7	183	0.4	12	11	156	1.19	34.65	19180	27.8	8.21	7.70	0.63	152.9
C24	10/13/25	908	2.0 High	0.1	3	3.4	47	1.58	22.2	4	125	0.2	6	3	36	0.62	34.81	19268	27.1	8.05	7.27	0.48	212.9
Mean				2.01	62	72.7	1018	0.62	8.7	376	10557	2.2	67	80	1118	0.51	19.12	10582	23.8	8.15	7.65	0.26	213.5
Std. Dev.				1.02	32	41.0	575	0.51	7.1	215	6050	1.0	31	41	570	0.98	8.05	4458	2.0	0.16	0.82	0.29	52.0
Maximum				4.27	132	164.4	2303	3.15	44.1	924	25951	6.3	196	217	3044	12.57	35.02	19384	29.0	8.50	10.12	1.57	298.9
Minimum				0.09	3	0.38	5	0.02	0.3	4	125	0.2	6	3	35.6	0.00	8.58	4751	20.9	7.10	5.04	0.00	136.2
n				185	185	185	185	185	185	185	185	184	184	184	184	182	185	185	186	185	185	166	8