

NELHA Water Quality Laboratory

Well 11A Data Table

1/22/2009 - 6/30/2025

Site	Pump Depth (m)	Date (M/D/Y)	Time (2400)	Depth to H ₂ O (m)	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)	Temp. (°C)	pH (unit)	Salinity (PSU)	Chloride (mg/L)	DO (ppm)	Turbidity (NTU)	ORP (mV)
W11A	-12.19	1/22/09	1026	-3.37	0.09 Low	3.44 107	74.9 1049	0.06 0.8	167 4690	24.3	7.83	27.00	14,945	4.21	5.23	
W11A	-12.19	2/24/09	942	-3.43	0.06 Ebb	2.98 92	62.1 870	0.15 2.1	193 5432	23.1	7.71	26.81	14,840	3.95	0.74	
W11A	-12.19	3/16/09	1031	-3.38	0.09 Ebb	2.67 83	39.0 547	0.13 1.8	151 4251	23.6	7.59	26.40	14,613	4.48	2.52	
W11A	-12.19	4/22/09	1230	-3.21	0.34 Flood								0			
W11A	-12.19	5/27/09	947	-3.38	0.09 Ebb	3.14 97	60.1 842	0.16 2.2	272 7636	22.2	7.64	27.77	15,371	3.78	1.44	
W11A	-12.19	6/16/09	1346	-3.07	0.40 Ebb	3.00 93	53.7 752	0.49 6.8	163 4583	22.5	7.79	28.63	15,847	3.97	1.25	
W11A	-12.19	7/14/09	1243	-3.17	0.40 Ebb	1.81 56	38.5 540	0.48 6.7	77 2168	23.3	7.72	29.09	16,102	3.83	0.72	
W11A	-12.19	8/19/09	1319	-2.90	0.52 Flood	2.88 89	69.3 970	0.77 10.8	140 3940	23.7	7.80	29.98	16,595	3.85	0.14	
W11A	-12.19	9/21/09	1455	-3.24	0.24 Flood	2.41 75	55.4 776	0.55 7.7	106 2987	24.6	8.45	30.05	16,633	4.55	0.51	
W11A	-12.19	10/22/09	1536	-3.36	0.15 Low	2.28 71	50.0 700	0.74 10.4	86 2423	24.4	7.86	29.54	16,351	3.80	0.44	
W11A	-12.19	11/17/09	800	-3.11	0.40 Ebb	3.42 106	65.6 920	0.83 11.6	186 5221	23.6	7.78	29.03	16,069	4.04	0.29	
W11A	-12.19	12/8/09	832	-3.06	0.49 Flood	2.42 75	32.2 451	0.69 9.6	214 6018	22.7	7.75	28.47	15,759	3.92	0.04	
W11A	-12.19	1/5/10	1451	-3.47	-0.03 Low	2.94 91	55.3 775	0.71 10.0	201 5649	23.3	7.76	27.53	15,239	4.35	3.63	
W11A	-12.19	2/1/10	1540	-3.26	0.15 Flood	3.13 97	65.4 916	0.57 8.0	178 5013	23.2	7.85	27.64	15,299	3.80	16.60	
W11A	-12.19	3/9/10	1529	-3.46	0.12 Ebb	3.97 123	56.5 791	0.29 4.0	224 6279	22.5	7.73	26.60	14,724	4.15	0.26	
W11A	-12.19	4/6/10	1354	-3.41	0.12 Ebb	3.87 120	55.1 772	1.14 16.0	214 6014	22.3	7.83	27.30	15,111	4.26	0.12	
W11A	-12.19	5/11/10	1420	-2.92	0.52 Flood	2.87 89	38.3 536	1.29 18.0	191 5351	22.3	7.91	28.35	15,692	3.85	0.61	
W11A	-12.19	6/16/10	908	-3.24	0.09 Ebb	2.87 89	44.0 616	0.57 8.0	197 5533	22.6	7.84	28.72	15,897	3.57	0.14	
W11A	-12.19	7/13/10	1409	-3.24	0.24 Flood	2.94 91	43.5 609	0.14 2.0	197 5529	23.0	7.87	29.07	16,091	3.74	0.30	
W11A	-12.19	8/3/10	1420	-3.00	0.43 Ebb	3.26 101	51.0 715	0.21 3.0	197 5526	23.1	7.83	29.28	16,207	3.90	0.07	
W11A	-12.19	9/14/10	1435	-3.10	0.34 Ebb	3.10 96	49.3 690	0.62 8.7	207 5815	23.2	7.80	29.10	16,108	4.91	0.32	
W11A	-12.19	10/12/10	1454	-3.24	0.18 Low	3.03 94	44.1 618	0.21 3.0	192 5394	23.4	7.85	29.20	16,163	3.91	0.40	
W11A	-12.19	11/16/10	1339	-3.00	0.37 Ebb	2.97 92	47.1 660	0.21 3.0	190 5326	23.6	7.84	29.34	16,240	3.62	0.25	
W11A	-12.19	12/14/10	1410	-3.20	0.18 Ebb	3.13 97	51.3 719	0.16 2.3	202 5675	23.2	7.81	28.06	15,532	3.53	0.33	
W11A	-12.19	1/4/11	1351	-3.34	0.12 Flood	3.16 98	42.3 592	0.14 2.0	194 5450	23.2	7.75	27.34	15,133	3.45	0.18	
W11A	-12.19	4/5/11	1416	-3.17	0.21 Flood	3.33 103	36.1 505	0.05 0.7	193 5425	22.3	7.75	27.23	15,073	2.94	0.12	
W11A	-12.19	7/12/11	1416	-2.86	0.73 Flood	2.91 90	34.2 479	0.09 1.3	203 5713	22.9	7.80	28.60	15,831	2.89	0.26	
W11A	-12.19	10/11/11	1248	-3.16	0.24 Flood	2.58 80	29.8 417	0.21 2.9	204 5733	23.2	7.77	29.59	16,379	2.62	0.49	
W11A	-12.19	1/10/12	1456	-3.34	0.09 Flood	2.42 75	59.4 832	0.09 1.3	207 5801	22.1	7.62	27.21	15,061	2.05	0.29	
W11A	-12.19	5/1/12	1500	-3.06	0.40 Ebb	3.03 94	39.1 548	0.24 3.3	198 5566	21.9	7.65	29.04	16,074	1.61	0.13	

NELHA Water Quality Laboratory

Well 11A Data Table

1/22/2009 - 6/30/2025

Site	Pump Depth (m)	Date (M/D/Y)	Time (2400)	Depth to H ₂ O (m)	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)	Temp. (°C)	pH (unit)	Salinity (PSU)	Chloride (mg/L)	DO (ppm)	Turbidity (NTU)	ORP (mV)
W11A	-12.19	7/18/12	1413	-2.94	0.52 Flood	2.49 77	24.4 342	0.30 4.2	179 5036	22.9	7.80	30.48	16,871	2.01	0.35	
W11A	-12.19	10/16/12	1351	-3.23	0.24 Flood	2.16 67	19.1 268	0.02 0.3	169 4751	23.5	7.73	30.39	16,822	1.52	0.38	
W11A	-12.19	1/8/13	1456	-3.22	0.15 Ebb	2.58 80	25.8 362	0.30 4.2	193 5415	22.5	7.76	28.87	15,980	1.18	4.75	
W11A	-12.19	4/9/13	1435	-3.05	0.46 Flood	3.52 109	26.4 370	0.58 8.1	180 5050	21.2	7.78	28.99	16,047	4.63	1.32	
W11A	-12.19	7/17/13	1552	-3.07	0.46 Ebb	2.97 92	28.8 403	0.11 1.6	194 5438	22.5	7.63	29.88	16,539	1.54	0.17	
W11A	-12.19	10/15/13	1431	-2.89	0.52 Ebb	2.42 75	30.5 427	0.19 2.7	172 4819	22.5	7.71	30.42	16,838	1.92	1.16	
W11A	-12.19	1/15/14	1420	-3.24	0.15 Flood	3.16 98	33.9 475	0.31 4.4	183 5144	22.1	7.65	28.57	15,814	2.17	0.08	
W11A	-12.19	4/29/14	1634	-2.87	0.58 High	2.84 88	53.0 743	0.22 3.1	178 4995	21.1	7.60	28.90	15,997	2.38	0.81	
W11A	-12.19	7/29/14	1512	-3.06	0.40 Flood	3.07 95	53.5 749	0.36 5.0	167 4691	22.6	7.65	30.25	16,744	2.36	0.21	
W11A	-12.19	11/5/14	1454	-2.92	0.40 High	2.91 90	50.3 704	0.16 2.3	175 4928	23.0	7.66	28.91	16,002	1.58	0.10	
W11A	-12.19	2/10/15	1140	-3.16	0.24 High	4.45 138	56.6 793	0.51 7.2	242 6799	22.2	7.48	27.88	15,432	1.60	0.52	
W11A	-12.19	5/19/15	1128	-3.45	0.00 Flood	4.10 127	62.3 873	0.35 4.9	176 4939	22.2	7.74	28.90	15,997	2.87	0.16	
W11A	-12.19	7/21/15	1414	-3.34	0.15 Flood	4.13 128	67.7 948	0.11 1.6	183 5130	23.7	7.71	29.65	16,412	2.44	0.08	
W11A	-12.19	11/9/15	1235	-3.05	0.40 Flood	3.45 107	58.1 814	0.16 2.2	194 5444	26.0	7.88	29.89	16,545	3.36	0.06	
W11A	-12.19	1/26/16	1143	-3.37	0.08 Low	4.57 142	34.6 484	0.01 0.1	179 5032	24.4	7.61	28.90	15,997	0.61	0.08	
W11A	-12.19	4/21/16	1352	-3.04	0.40 Flood	10.52 326	21.1 296	0.49 6.9	157 4418	23.3	7.69	30.58	16,927	1.04	0.03	
W11A	-12.19	7/26/16	1012	-3.02	0.30 Flood	6.64 206	13.6 191	0.33 4.6	150 4214	24.8	7.99	30.76	17,026	1.51	0.08	
W11A	-12.19	11/10/16	1316	-2.90	0.30 Ebb	4.69 145	18.9 265	0.54 7.5	151 4234	26.0	7.65	30.65	16,966	2.00	0.12	
W11A	-12.19	3/21/17	1606	-3.17	0.07 Low	3.45 107	28.4 398	0.29 4.0	180 5063	23.4	7.86	29.64	16,407	1.88	0.18	
W11A	-12.19	4/13/17	1405	-3.25	0.30 Flood	2.86 89	23.3 327	0.24 3.4	163 4564	23.9	7.92	30.26	16,750	2.11	0.08	
W11A	-12.19	8/4/17	1350	-2.74	0.62 High	3.06 95	13.6 190	0.04 0.5	161 4531	23.2	7.86	30.99	17,154	2.04	0.17	
W11A	-12.19	10/19/17	1021	-3.27	0.09 Low	2.53 79	25.9 363	0.38 5.3	159 4465	25.6	7.96	29.98	16,595	4.56	0.23	
W11A	-12.19	1/17/18	1408	-3.28	0.25 Flood	2.30 71	26.4 370	0.09 1.2	167 4696	23.6	7.83	29.11	16,113	1.77	0.06	
W11A	-12.19	5/10/18	1348	-3.05	0.35 Ebb	2.70 84	29.2 409	0.26 3.7	177 4984	22.2	7.72	32.16	17,801	1.40	0.56	
W11A	-12.19	8/20/18	1229	-2.90	0.61 Flood	3.00 93	17.6 247	0.29 4.1	165 4620	24.6	7.79	29.72	16,451	2.08	0.18	
W11A	-12.19	10/25/18	1417	-3.10	0.40 Flood	2.55 79	19.6 275	0.03 0.4	151 4229	25.7	7.95	30.73	17,010	2.27	0.10	
W11A	-12.19	2/7/19	1427	-3.42	0.20 Flood	5.58 173	26.7 373	0.01 0.2	162 4542	22.8	7.78	29.60	16,384	1.42	0.08	
W11A	-12.19	5/16/19	1351	-2.97	0.50 Flood	4.71 146	8.7 122	7.62 106.7	171 4798	22.1	7.76	30.26	16,750	2.68	0.04	
W11A	-12.19	8/29/19	955	-3.35	0.00 Flood	2.86 89	35.8 501	0.18 2.5	165 4633	25.5	7.94	30.02	16,617	3.91	0.06	
W11A	-12.19	10/10/19	1151	-3.02	0.45 Flood	2.27 70	74.4 1042	0.19 2.7	147 4127	26.6	8.02	30.79	17,043	2.36	0.13	

NELHA Water Quality Laboratory

Well 11A Data Table

1/22/2009 - 6/30/2025

Site	Pump Depth (m)	Date (M/D/Y)	Time (2400)	Depth to H ₂ O (m)	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)	Temp. (°C)	pH (unit)	Salinity (PSU)	Chloride (mg/L)	DO (ppm)	Turbidity (NTU)	ORP (mV)
W11A	-12.19	2/4/20	1452	-3.25	0.10 Ebb	5.20 161	106.8 1496	0.11 1.6	235 6613	24.7	7.78	29.08	16,097	1.07	0.15	
W11A	-12.19	6/2/20	1057	-3.03	0.35 Flood	2.65 82	91.8 1286	0.34 4.7	166 4657	22.7	7.70	29.93	16,567	1.07	0.07	
W11A	-12.19	8/19/20	1000	-3.32	0.00 Flood	3.11 96	101.9 1427	0.28 3.9	181 5088	24.2	7.74	28.10	15,554	1.97	0.14	
W11A	-12.19	12/9/20	939	-2.93	0.45 Flood	3.45 107	67.5 945	0.24 3.4	172 4845	24.2	7.77	30.15	16,689	3.25	1.00	
W11A	-12.19	2/17/21	1043	-3.12	0.10 Low	2.86 89	62.3 873	0.14 1.9	156 4376	24.8	7.83	29.78	16,484	3.29	0.10	
W11A	-12.19	4/14/21	1123	-3.43	-0.02 Low	3.95 122	59.9 840	0.13 1.8	177 4982	24.3	7.75	28.35	15,692	1.98	0.13	
W11A	-12.19	7/7/21	1046	-3.33	0.35 Flood	4.00 124	51.4 720	0.09 1.3	164 4610	24.2	7.75	29.12	16,119	2.72	0.07	
W11A	-12.19	11/8/21	1150	-3.16	0.25 Ebb	3.67 114	51.7 724	0.26 3.6	193 5434	24.0	7.69	27.10	15,001	2.49	0.08	
W11A	-12.19	2/4/22	1416	-3.40	0.17 Flood	5.18 160	78.1 1094	0.06 0.8	226 6340	23.2	7.75	27.35	15,139	2.80	0.14	
W11A	-12.19	4/20/22	1121	-3.55	-0.03 Low	3.18 98	39.9 558	-0.03 -0.4	213 5982	23.4	7.75	27.31	15,117	2.52	0.04	
W11A	-12.19	7/12/22	1346	-3.93	0.80 High	3.78 117	40.6 568	-0.26 -3.6	170 4778	23.9	7.81	29.87	16,534	2.63	0.08	
W11A	-12.19	11/22/22	1027	-3.27	0.20 Flood	2.69 83	76.3 1068	0.00 0.0	153 4303	24.6	7.84	28.42	15,731	3.12	0.76	
W11A	-12.19	1/26/23	940	-2.99	0.35 Ebb	2.66 82	76.6 1073	0.06 0.8	162 4544	23.4	7.81	26.91	14,895	3.02	0.19	
W11A	-12.19	4/25/23	1433	-3.40	0.13 Flood	3.32 103	72.1 1010	0.16 2.2	224 6284	22.1	7.68	27.11	15,006	2.53	0.08	
W11A	-12.19	8/15/23	1007	-3.36	0.10 Flood	3.17 98	71.0 995	0.01 0.1	176 4955	23.4	7.70	28.85	15,969	2.97	1.26	
W11A	-12.19	11/15/23	1420	-3.16	0.30 High	2.99 93	45.6 638	0.12 1.7	169 4746	24.6	7.75	28.58	15,820	3.42	0.35	136.9
W11A	-12.19	1/23/24	1037	-3.28	0.50 Flood	2.67 83	45.7 640	0.00 0.0	176 4950	22.6	7.74	27.61	15,283	3.22	0.25	144.9
W11A	-12.19	5/7/24	1141	-3.30	0.15 Flood	2.99 93	40.3 565	0.06 0.9	192 5392	20.9	7.66	26.79	14,829	2.44	0.20	190.1
W11A	-12.19	7/31/24	1136	-2.93	0.55 Flood	3.28 102	31.3 439	0.17 2.4	173 4858	21.4	7.66	28.54	15,798	2.51	0.32	121.5
W11A	-12.19	12/10/24	1505	-3.16	0.20 Ebb	4.09 127	43.4 608	0.54 7.6	204 5721	22.5	7.72	26.49	14,663	2.92	0.29	142.0
W11A	-12.19	1/9/25	1433	-3.16	0.05 Ebb	3.86 120	40.6 569	0.78 10.9	191 5361	22.1	7.72	27.33	15,128	3.33	0.11	157.3
W11A	-12.19	5/14/25	1116	-3.41	0.00 Flood	4.89 152	33.5 469	0.10 1.4	193 5408	22.3	7.70	27.42	15,178	2.15	0.14	141.6
Mean				-3.19	0.27	3.36 104	46.66 653	0.37 5.2	180 5063	23.3	7.77	28.87	15,784	2.84	0.69	147.8
Std. Dev.				0.20	0.19	1.16 36	20.06 281	0.86 12.0	29 824	1.2	0.12	1.27	1,898	1.03	2.00	21.5
Maximum				-2.74	0.80	10.52 326	106.81 1496	7.62 106.7	272 7636	26.6	8.45	32.16	17,801	4.91	16.60	190.1
Minimum				-3.93	-0.03	1.81 56	8.72 122	-0.26 -3.6	77 2168	20.9	7.48	26.40	0	0.61	0.03	121.5
n				82	82	81 81	81 81	81 81	81 81	81	81	81	82	81	81	7