

NELHA Water Quality Laboratory

Well 11 Data Table

4/22/2009 - 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)
W11	-18.29	1/22/09	1037	-3.23	0.09 Low	1.67 52	56.4 790	1.79 25.1	106 2966	22.7	8.09	30.05	16,633	3.01	0.95	
W11	-18.29	2/24/09	958	-3.32	0.06 Ebb	0.89 28	49.3 690	0.50 7.0	105 2949	20.7	7.91	30.17	16,700	3.33	0.75	
W11	-18.29	3/16/09	1044	-3.31	0.09 Ebb	1.13 35	35.2 493	0.13 1.8	87 2436	22.3	7.75	29.49	16,323	3.84	0.41	
W11	-18.29	4/22/09	1218	-3.10	0.34 Flood	1.55 48	39.6 555	0.19 2.6	108 3035	21.6	7.80	29.82	16,506	3.32	9.77	
W11	-18.29	5/27/09	920	-3.29	0.09 Ebb	1.62 50	47.9 671	0.16 2.2	101 2835	19.4	7.77	30.10	16,661	3.84	0.52	
W11	-18.29	6/16/09	1359	-2.97	0.40 Ebb	1.90 59	45.9 643	0.53 7.4	124 3494	19.5	7.58	30.06	16,639	4.23	0.29	
W11	-18.29	7/14/09	1256	-3.08	0.40 Ebb	1.81 56	38.5 540	0.48 6.7	77 2168	19.7	7.89	30.10	16,661	4.16	0.19	
W11	-18.29	8/19/09	1334	-2.80	0.52 Flood	2.36 73	50.0 701	0.69 9.7	118 3312	20.9	7.78	30.34	16,794	3.59	0.19	
W11	-18.29	9/21/09	1518	-3.21	0.24 Flood	2.44 76	48.8 684	0.59 8.3	93 2600	21.4	8.31	30.70	16,993	3.90	0.15	
W11	-18.29	10/22/09	1555	-3.29	0.15 Low	3.63 113	51.6 723	0.70 9.8	92 2579	22.7	7.82	31.12	17,226	3.55	0.06	
W11	-18.29	11/17/09	821	-3.06	0.40 Ebb	3.22 100	56.5 792	0.81 11.4	144 4058	21.5	7.82	30.53	16,899	3.87	0.06	
W11	-18.29	12/8/09	811	-2.99	0.49 Flood	3.16 98	67.4 944	1.16 16.2	166 4671	22.4	7.91	29.93	16,567	4.12	0.05	
W11	-18.29	1/5/10	1432	-3.44	-0.03 Low	2.87 89	56.2 787	0.93 13.0	142 3977	22.3	7.87	30.00	16,606	4.33	0.07	
W11	-18.29	2/1/10	1529	-3.22	0.15 Flood	2.84 88	51.8 725	0.50 7.0	130 3651	22.3	7.94	30.46	16,860	4.19	0.07	
W11	-18.29	3/9/10	1517	-3.35	0.12 Ebb	3.29 102	39.9 559	0.57 8.0	147 4117	23.6	7.93	30.37	16,811	3.96	0.07	
W11	-18.29	4/6/10	1349	-3.35	0.12 Ebb	3.62 112	44.8 627	1.36 19.0	161 4519	23.6	7.90	30.35	16,800	4.42	0.14	
W11	-18.29	5/11/10	1414	-2.90	0.52 Flood	2.68 83	41.3 578	0.93 13.0	140 3933	22.6	7.96	30.10	16,661	4.58	0.06	
W11	-18.29	6/16/10	920	-3.19	0.09 Ebb	3.07 95	46.9 657	0.36 5.0	152 4278	22.2	7.90	30.02	16,617	4.24	0.19	
W11	-18.29	7/13/10	1402	-3.22	0.24 Flood	3.00 93	40.1 561	0.57 8.0	152 4268	20.5	7.87	30.35	16,800	3.96	0.10	
W11	-18.29	8/3/10	1403	-2.96	0.43 Ebb	3.07 95	35.5 497	0.48 6.7	160 4484	23.5	7.94	30.65	16,966	3.98	0.05	
W11	-18.29	9/14/10	1417	-3.02	0.34 Ebb	2.94 91	34.1 478	0.14 1.9	161 4516	21.8	7.88	30.77	17,032	3.96	0.12	
W11	-18.29	10/12/10	1442	-3.14	0.18 Low	2.78 86	31.2 437	0.48 6.7	157 4410	23.1	7.95	31.19	17,264	3.96	0.08	
W11	-18.29	11/16/10	1331	-3.10	0.37 Ebb	2.91 90	35.6 499	0.51 7.1	156 4394	23.1	7.94	31.14	17,237	4.12	0.09	
W11	-18.29	12/14/10	1402	-3.17	0.18 Ebb	2.91 90	40.1 562	0.13 1.8	159 4473	22.1	7.92	30.74	17,015	4.01	0.10	
W11	-18.29	1/4/11	1400	-3.31	0.12 Flood	3.16 98	39.5 553	0.49 6.9	153 4292	21.7	7.81	30.60	16,938	3.85	0.11	
W11	-18.29	4/5/11	1409	-3.06	0.21 Flood	2.97 92	35.6 498	0.05 0.7	140 3945	20.8	7.77	30.07	16,645	3.38	0.05	
W11	-18.29	7/12/11	1426	-2.85	0.73 Flood	3.00 93	32.4 454	0.12 1.7	156 4391	21.1	7.86	30.50	16,883	3.70	0.10	
W11	-18.29	10/11/11	1240	-3.08	0.24 Flood	3.07 95	24.8 347	0.19 2.7	156 4390	22.2	7.87	31.40	17,381	3.66	0.07	
W11	-18.29	1/10/12	1504	-3.36	0.09 Flood	3.00 93	27.8 389	0.09 1.3	145 4082	21.7	7.81	30.55	16,910	2.65	0.09	
W11	-18.29	5/1/12	1450	-3.05	0.40 Ebb	3.65 113	32.9 461	0.22 3.1	151 4240	19.5	7.83	30.29	16,766	3.00	0.05	
W11	-18.29	7/18/12	1406	-2.91	0.52 Flood	2.94 91	22.2 311	0.23 3.2	157 4420	21.5	7.89	31.31	17,331	2.79	0.34	
W11	-18.29	10/16/12	1358	-3.21	0.24 Flood	2.78 86	17.2 241	0.04 0.5	153 4299	21.9	7.82	31.24	17,292	1.64	0.07	
W11	-18.29	1/8/13	1448	-3.26	0.15 Ebb	2.39 74	13.8 193	0.14 1.9	171 4812	20.3	7.75	30.56	16,916	0.63	0.04	
W11	-18.29	4/9/13	1427	-3.05	0.46 Flood	2.32 72	13.7 192	0.70 9.8	143 4013	18.6	7.76	30.20	16,716	0.34	0.07	
W11	-18.29	7/17/13	1545	-3.06	0.46 Ebb	2.03 63	26.9 377	0.10 1.4	151 4239	19.4	7.64	30.51	16,888	1.09	0.29	

NELHA Water Quality Laboratory

Well 11 Data Table

4/22/2009 - 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)
W11	-18.29	10/15/13	1424	-2.80	0.52 Ebb	1.87 58	20.6 288	0.16 2.3	146 4104	19.3	7.68	30.96	17,137	0.98	0.06	
W11	-18.29	1/15/14	1412	-2.95	0.15 Flood	2.36 73	28.4 398	0.31 4.4	154 4328	19.2	7.69	30.82	17,060	1.30	0.07	
W11	-18.29	4/29/14	1640	-2.84	0.58 High	2.00 62	37.2 521	0.41 5.7	155 4357	18.5	7.57	30.10	16,661	1.41	0.12	
W11	-18.29	7/29/14	1505	-3.08	0.40 Flood	2.16 67	39.7 556	0.21 3.0	152 4272	19.0	7.69	30.82	17,060	1.30	0.07	
W11	-18.29	11/5/14	1447	-2.92	0.40 High	2.42 75	45.0 631	0.07 1.0	154 4315	20.1	7.62	30.56	16,916	1.08	0.10	
W11	-18.29	2/10/15	1158	-3.15	0.24 High	2.95 91	47.4 664	0.53 7.4	182 5118	20.4	7.53	30.06	16,639	1.04	0.21	
W11	-18.29	5/19/15	1138	-3.50	0.00 Flood	2.54 79	56.9 797	0.43 6.0	162 4538	19.3	7.59	29.92	16,561	1.35	0.02	
W11	-18.29	7/21/15	1414	-3.34	0.15 Flood	3.10 96	38.2 535	0.01 0.2	163 4581	20.1	7.48	31.11	17,220	1.24	0.07	
W11	-18.29	11/9/15	1245	-3.06	0.40 Flood	3.17 98	62.5 875	0.06 0.8	197 5538	20.4	7.68	30.37	16,811	1.48	0.08	
W11	-18.29	1/26/16	1153	-3.40	0.08 Low	2.98 92	60.5 848	0.16 2.2	158 4428	21.2	7.55	30.26	16,750	1.22	0.05	
W11	-18.29	4/21/16	1403	-3.06	0.40 Flood	7.16 222	27.6 387	0.31 4.3	157 4407	21.4	7.55	30.94	17,126	0.96	0.04	
W11	-18.29	7/26/16	1000	-3.00	0.30 Flood	4.78 148	12.1 170	0.27 3.8	139 3912	22.2	7.63	31.46	17,414	0.78	0.10	
W11	-18.29	11/10/16	1328	-2.92	0.30 Ebb	4.54 141	11.2 156	0.02 0.3	154 4314	22.5	7.63	31.27	17,309	0.88	0.02	
W11	-18.29	3/21/17	1618	-3.17	0.07 Low	5.26 163	16.7 234	0.81 11.4	155 4367	20.9	7.65	30.77	17,032	0.76	0.30	
W11	-18.29	4/13/17	1414	-3.25	0.30 Flood	5.30 164	19.1 268	0.66 9.2	160 4492	21.2	7.68	30.81	17,054	1.07	0.08	
W11	-18.29	8/4/17	1350	-2.74	0.62 High	5.73 178	9.9 139	1.44 20.2	157 4418	20.3	7.73	31.23	17,287	0.54	0.09	
W11	-18.29	10/19/17	1038	-3.30	0.09 Low	5.30 164	17.2 241	0.44 6.1	146 4112	21.5	7.71	31.12	17,226	1.66	0.04	
W11	-18.29	1/17/18	1421	-3.27	0.25 Flood	4.82 149	12.5 176	0.12 1.7	163 4566	21.3	7.70	30.64	16,960	0.79	0.03	
W11	-18.29	5/10/18	1402	-3.00	0.35 Ebb	3.91 121	9.4 132	2.21 30.9	161 4516	19.6	7.56	33.31	18,438	0.95	0.22	
W11	-18.29	8/20/18	1229	-2.90	0.61 Flood	3.51 109	11.8 166	0.29 4.1	160 4496	21.4	7.61	30.23	16,733	1.66	0.05	
W11	-18.29	10/25/18	1430	-3.11	0.40 Flood	3.21 99	12.3 172	0.01 0.1	160 4488	21.9	7.70	30.64	16,960	0.99	0.05	
W11	-18.29	2/7/19	1439	-3.37	0.20 Flood	3.92 121	13.7 192	0.10 1.4	169 4733	20.5	7.56	29.96	16,584	1.50	0.05	
W11	-18.29	5/16/19	1403	-2.97	0.50 Flood	4.19 130	26.7 373	0.11 1.6	166 4659	18.9	7.38	30.80	17,049	0.40	0.19	
W11	-18.29	8/29/19	1007	-3.36	0.00 Flood	4.79 148	18.8 264	0.88 12.3	167 4693	20.9	7.67	30.51	16,888	1.66	5.03	
W11	-18.29	10/10/19	1203	-3.02	0.45 Flood	4.45 138	24.3 340	0.21 2.9	161 4512	23.7	7.82	31.49	17,431	2.51	0.07	
W11	-18.29	2/4/20	1503	-3.28	0.10 Ebb	5.60 174	39.6 555	1.87 26.2	168 4712	21.0	7.73	30.86	17,082	0.35	0.02	
W11	-18.29	6/2/20	1107	-3.04	0.35 Flood	4.22 131	38.6 541	5.34 74.8	168 4730	19.6	7.65	30.79	17,043	0.12	0.03	
W11	-18.29	8/19/20	1013	-3.31	0.00 Flood	3.34 104	58.5 820	1.73 24.2	169 4741	19.6	7.63	28.40	15,720	0.43	0.07	
W11	-18.29	12/9/20	949	-2.93	0.45 Flood	4.27 132	46.8 655	0.48 6.7	171 4789	21.2	7.59	31.02	17,170	1.57	0.12	
W11	-18.29	2/17/21	1055	-3.12	0.10 Low	4.20 130	35.0 490	0.28 3.9	163 4572	21.7	7.60	31.09	17,209	1.88	0.06	
W11	-18.29	4/14/21	1135	-3.44	-0.02 Low	3.89 120	39.7 556	0.12 1.7	160 4499	22.0	7.55	31.02	17,170	2.41	0.07	
W11	-18.29	7/7/21	1103	-3.34	0.35 Flood	4.58 142	19.3 270	0.09 1.2	161 4529	21.7	7.49	30.39	16,822	1.02	0.06	
W11	-18.29	11/8/21	1200	-3.18	0.25 Ebb	4.30 133	31.0 435	0.31 4.3	160 4490	20.0	7.49	29.78	16,484	1.46	0.02	
W11	-18.29	2/4/22	1426	-3.41	1.70 Flood	6.19 192	29.9 419	0.08 1.1	189 5308	19.6	7.56	29.35	16,246	1.07	0.06	
W11	-18.29	4/21/22	1132	-3.58	-0.03 Low	4.36 135	20.8 292	0.34 4.7	161 4529	20.2	7.59	29.64	16,407	1.96	0.09	

NELHA Water Quality Laboratory

Well 11 Data Table

1/22/2022 - 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)
W11	-18.29	7/12/22	1359	-2.94	0.80 High	4.49 139	23.7 332	-0.31 -4.4	169 4752	20.8	7.65	30.06	16,639	1.57	0.02	
W11	-18.29	11/22/22	1038	-3.28	0.20 Flood	4.79 148	38.5 539	0.02 0.3	157 4413	20.5	7.71	30.08	16,650	1.46	0.36	
W11	-18.29	1/26/23	953	-3.01	0.35 Ebb	4.22 131	40.9 573	0.16 2.2	155 4363	20.6	7.68	29.84	16,517	1.12	0.04	
W11	-18.29	4/25/23	1453	-3.41	0.13 Flood	5.05 156	15.0 210	0.40 5.6	163 4575	19.3	7.56	29.45	16,301	0.62	0.10	
W11	-18.29	8/15/23	1020	-3.37	0.10 Flood	4.18 130	27.3 382	-0.01 -0.2	159 4475	19.4	7.59	29.78	16,484	0.99	0.84	
W11	-18.29	11/15/23	1434	-3.16	0.30 High	3.85 119	14.1 197	0.11 1.6	170 4770	19.3	7.68	29.71	16,445	0.61	0.36	118.5
W11	-18.29	1/23/24	1049	-3.31	0.50 Flood	4.08 126	10.5 147	0.07 1.0	161 4526	18.5	7.63	29.62	16,395	0.69	0.09	112.2
W11	-18.29	5/7/24	1153	-3.31	0.20 Flood	4.08 126	16.4 230	-0.08 -1.1	163 4582	17.8	7.61	29.31	16,224	0.50	0.28	169.6
W11	-18.29	7/31/24	1203	-2.93	0.55 Flood	4.07 126	17.6 246	-0.11 -1.6	169 4759	17.7	7.59	29.23	16,180	0.27	0.11	106.8
W11	-18.29	12/10/24	1518	-3.19	0.20 Ebb	4.06 126	19.5 274	0.41 5.8	168 4727	18.2	7.64	29.26	16,196	0.84	0.09	100.1
W11	-18.29	1/9/25	1444	-3.18	0.05 Ebb	4.08 126	17.3 242	0.56 7.8	165 4627	18.3	7.61	29.28	16,207	0.57	0.19	125.8
W11	-18.29	5/14/25	1128	-3.36	0.00 Flood	4.21 130	19.4 272	0.09 1.3	170 4781	18.3	7.56	29.18	16,152	0.52	0.34	116.7
Mean				-3.15	0.29	3.48 108	32.56 456	0.48 6.7	152 4265	20.8	7.72	30.40	16,829	2.11	0.32	121.4
Std. Dev.				0.18	0.24	1.18 37	14.91 209	0.72 10.0	22 621	1.5	0.16	0.70	388	1.41	1.20	22.8
Maximum				-2.74	1.70	7.16 222	67.40 944	5.34 74.8	197 5538	23.7	8.31	33.31	18,438	4.58	9.77	169.6
Minimum				-3.58	-0.03	0.89 28	9.45 132	-0.31 -4.4	77 2168	17.7	7.38	28.40	15,720	0.12	0.02	100.1
n				82	82	82 82	82 82	82 82	82 82	82	82	82	82	82	82	7