

NELHA Water Quality Laboratory

Well 4A Data Table

6/27/1989 - 12/31/2005

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)
W4A	-10.67	6/27/89				8.96 278		99.3 1390.9		22.3	8.060	15.233	8,432	4.03		
W4A	-10.67	8/10/89	1011			7.21 223		36.6 512.6		21.6	8.028	14.210	7,866	1.04		
W4A	-10.67	8/15/89	1508			6.05 187		27.9 390.8		21.5	8.027	15.722	8,703	1.71		
W4A	-10.67	8/22/89	1435			6.93 215		37.5 525.3		21.3	8.050	15.511	8,586	1.59		
W4A	-10.67	8/30/89	1435			8.34 258		24.4 341.8		21.6	8.095	14.095	7,802	1.34		
W4A	-10.67	8/30/89	1435			8.35 259		24.2 339.0								
W4A	-10.67	10/31/89	1134			7.92 245	12 162	26.9 376.8	567 15924	21.5	7.879	14.719	8,147	0.10		
W4A	-10.67	11/16/89	1130			7.85 243	5 64	72.5 1015.5	555 15587	21.6	7.864	14.560	8,059	0.44		
W4A	-10.67	12/12/89	1135			23.2 719	857 12004	60.9 853.0	181 5083	21.5	8.861	11.875	6,573	NA		
W4A	-10.67	1/11/90	950			14.8 458	652 9132	51.8 725.5	197 5533	21.7	8.632	14.328	7,931	NA		
W4A	-10.67	2/14/90	1155			1.31 41	116 1625	4.72 66.1	121 3398	21.7	8.320	14.360	7,949	4.76		
W4A	-10.67	3/7/90	1137			10.1 313	80 1118	6.67 93.4	291	21.5	8.594	10.881	6,023	2.69		
W4A	-10.67	4/4/90	1342			13.6 421	11 158	1.37 19.2	257 7218	21.9	8.420	14.011	7,755	NA		
W4A	-10.67	5/17/90	1202			8.80 273	18 251	4.44 62.2	250 7021	21.8	8.281	15.696	8,688	1.21		
W4A	-10.67	6/16/90	1105			7.60 235	22 314	8.78 123.0	319 8959	21.8	8.327	17.240	9,543	1.69		
W4A	-10.67	7/17/90	1146			7.09 220	26 366	4.93 69.1	342 9605	21.8	8.294	17.853	9,882	2.58		
W4A	-10.67	8/8/90	1137			6.99 217	19 269	4.76 66.7	334 9381	21.8	8.278	18.042	9,987	1.93		
W4A	-10.67	9/5/90	1143			7.47 231	20 280	2.40 33.6	ND ND	21.8	8.272	17.356	9,607	1.93		
W4A	-10.67	10/4/90	1151			9.40 291	22 313	3.87 54.2	374 10504	21.8	8.226	17.570	9,725	1.91		
W4A	-10.67	11/1/90	1205			5.85 181	26 359	2.84 39.8	405 11375	21.7	8.180	17.960	9,941	2.02		
W4A	-10.67	12/10/90	1142			8.32 258	23 321	6.99 97.9	435 12217	21.8	8.230	16.632	9,206	2.07		
W4A	-10.67	1/10/91	1000			7.46 231	8 112	4.52 63.3	324 9100	22.1	8.211	15.925	8,815	0.41		
W4A	-10.67	2/5/91	1137			8.62 267	54 759	2.44 34.2	274 7695	21.8	8.555	12.097	6,696	1.07		
W4A	-10.67	3/7/91	803			8.67 269	40 562	0.37 5.2	289 8117	21.5	8.369	14.018	7,759	0.81		
W4A	-10.67	4/3/91	844			8.20 254	15 207	2.46 34.5	273 7667	21.4	8.798	15.974	8,842	0.69		
W4A	-10.67	5/22/91	819			4.30 133	8 113	2.57 36.0	371 10420	21.6	8.294	16.709	9,249	0.46		
W4A	-10.67	6/26/91	824			4.83 150	25 345	1.50 21.0	357 10027	21.6	8.290	13.749	7,610	0.72		
W4A	-10.67	7/24/91	858			2.85 88	9 122	0.75 10.5	340 9549	19.1	8.228	15.924	8,814	0.41		
W4A	-10.67	8/23/91	810			4.41 137	20 282	0.15 2.1	365 10251	21.5	8.191	15.994	8,853	0.54		
W4A	-10.67	9/24/91	733			5.53 171	31 427	0.30 4.2	416 11684	21.5	8.128	14.603	8,083	1.67		
W4A	-10.67	10/23/91	733			7.12 221	62 873	0.32 4.5	508 14267	21.5	8.230	15.647	8,661	0.38		
W4A	-10.67	11/20/91	756			8.20 254	18 255	1.15 16.1	424 11908	21.5	8.160	15.552	8,608	0.29		
W4A	-10.67	12/11/91	857			11.7 362	74 1032	4.19 58.7	347 9746	21.0	8.803	14.071	7,789	0.58		
W4A	-10.67	1/29/92	817			7.68 238	19 266	0.54 7.6	416 11684	21.6	8.144	14.235	7,879	0.55		
W4A	-10.67	2/19/92	853			7.63 236	28 389	0.11 1.5	402 11290	21.6	8.136	14.048	7,776	0.81		

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Well 4A Data Table

6/27/1989 - 12/31/2025

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)
W4A	-10.67	3/17/92	805			5.47 169	17 231	0.69 9.7	371 10420	21.7	8.101	14.311	7,922	0.70		
W4A	-10.67	4/8/92	751			5.70 177	17 235	0.53 7.4	421 11824	21.7	8.074	14.708	8,141	0.73		
W4A	-10.67	5/6/92	802			5.94 184	12 164	0.91 12.7	440 12358	21.6	8.056	15.035	8,322	0.41		
W4A	-10.67	6/23/92	803			6.75 209	11 150	1.32 18.5	447 12554	21.7	8.036	15.686	8,683	0.50		
W4A	-10.67	7/29/92	752			5.43 168	18 256	ND 0.0	453 12723	21.7	8.023	14.764	8,172	0.59		
W4A	-10.67	8/26/92	736			6.72 208	30 419	0.21 2.9	487 13678	21.6	8.039	13.892	7,690	0.92		
W4A	-10.67	9/22/92	740			5.98 185	7 93	0.68 9.5	539 15138	21.6	8.029	15.481	8,569	0.44		
W4A	-10.67	10/27/92	755			6.34 196	22 313	0.50 7.0	488 13706	21.6	7.999	16.486	9,125	1.15		
W4A	-10.67	11/17/92	817			6.02 186	21 295	0.54 7.6	470 13200	21.5	8.025	15.369	8,507	0.72		
W4A	-10.67	12/8/92	802			6.17 191	32 444	0.64 9.0	499 14015	21.6	8.027	14.277	7,903	1.30		
W4A	-10.67	1/26/93	814			5.92 183	24 340	0.33 4.6	515 14458	21.6	8.064	14.303	7,917	1.05		
W4A	-10.67	2/23/93	745			6.00 186	20 276	0.25 3.5	516 14498	21.5	8.040	14.952	8,276	0.76		
W4A	-10.67	3/16/93	745			6.36 197	14 199	0.42 5.9	513 14402	21.6	8.008	15.652	8,664	0.48		
W4A	-10.67	4/27/93	749			5.18 160	26 370	0.39 5.5	551 15475	21.7	7.989	15.744	8,715	0.99		
W4A	-10.67	5/25/93	743			4.86 151	29 400	0.43 6.0	544 15279	21.7	7.981	15.064	8,338	1.11		
W4A	-10.67	6/28/93	822			4.93 153	25 353	0.19 2.7	527 14801	21.7	7.952	16.114	8,920	1.09		
W4A	-10.67	8/31/93	819			5.08 157	26 367	0.08 1.1	552 15503	21.7	7.925	14.735	8,156	0.63		
W4A	-10.67	10/26/93	751			5.09 158	42 587	0.42 5.9	529 14857	21.6	7.944	14.270	7,899	1.32		
W4A	-10.67	3/1/94	737			25.2 781	1780 24932	53.2 745.3	184 5168	21.6	8.941	13.342	7,385	NA		
W4A	-10.67	6/21/94	726			10.5 326	601 8420	25.7 359.7	51.6 1449	21.7	8.002	15.474	8,565	6.08		
W4A	-10.67	8/23/94	807			21.8 676	1660 23251	34.9 489.0	76.3 2143	21.7	9.100	16.098	8,911	5.75		
W4A	-10.67	10/25/94	823			34.0 1053	695 9733	33.1 464.2	86.6 2432	21.7	8.770	15.321	8,481	NA		
W4A	-10.67	11/28/94	1200			28.0 869	540 7557	19.4 272.2	109 3075	21.8		15.321	8,481			
W4A	-10.67	12/13/94	849			23.1 716	272 3806	9.39 131.5	184 5162	21.7		15.321	8,481			
W4A	-10.67	1/24/95	821			24.5 758	341 4780	8.70 121.9	150 4209	21.6	8.582	15.321	8,481	1.83		
W4A	-10.67	2/14/95	802			19.9 616	202 2831	1.61 22.6	184 5168	21.7	8.514	15.321	8,481	0.79		
W4A	-10.67	3/14/95	856			19.2 595	718 10058	71.0 993.8	88.9 2496	21.7	8.917	15.321	8,481	4.59		
W4A	-10.67	4/25/95	921			16.8 520	242 3384	5.38 75.4	147 4131	21.6	8.556	15.321	8,481	1.45		
W4A	-10.67	5/9/95	811			14.9 462	131 1835	2.02 28.3	181 5089	21.8	8.537	15.321	8,481	2.51		
W4A	-10.67	6/27/95	829			14.4 446	183 2567	0.40 5.6	205 5746	21.7	8.422	15.321	8,481	0.80		
W4A	-10.67	7/25/95	843			13.3 412	119 1669	0.15 2.1	217 6106	21.8	8.430	14.709	8,142	1.10		
W4A	-10.67	8/22/95	928			14.1 438	110 1538	0.47 6.6	220 6173	21.8	8.392	15.922	8,813	0.78		
W4A	-10.67	9/12/95	710			13.8 428	87 1225	0.08 1.1	226 6359	21.7	8.449	16.579	9,177	1.72		
W4A	-10.67	10/17/95	911			13.2 408	76 1059	0.14 2.0	251 7055	21.9	8.506	14.373	7,956	2.53		
W4A	-10.67	11/7/95	823			12.9 398	76 1066	0.29 4.1	238 6676	21.8	8.468	16.340	9,045	1.15		

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6/27/1989 - 12/31/2005

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)
W4A	-10.67	12/6/95	837			12.7 394	71 992	0.26 3.6	262 7367	21.8	8.529	14.653	8,111	2.62		
W4A	-10.67	1/30/96	912			11.0 340	77 1074	0.12 1.7	261 7328	21.6	8.534	14.984	8,294	2.52		
W4A	-10.67	2/27/96	921			11.0 340	72 1006	0.15 2.1	281 7895	21.9	8.448	15.680	8,679	2.20		
W4A	-10.67	3/13/96	953			12.8 397	126 1761	0.29 4.1	241 6755	22.0	8.542	14.340	7,938	2.28		
W4A	-10.67	4/2/96	925			21.5 667	2220 31095	1.10 15.4	119 3338	22.2	9.277	11.412	6,317	4.67		
W4A	-10.67	5/15/96	922			25.5 789	2270 31795	191 2675.3	92.5 2597	23.6	9.422	12.390	6,858	1.63		
W4A	-10.67	6/18/96	845			21.9 679	2550 35717	134 1878.3	86.5 2429	22.1	9.133	15.226	8,428	1.56		
W4A	-10.67	7/17/96	920			55.1 1705	5480 76757	46.4 649.2	66.9 1880	22.1	9.639	13.011	7,202	0.99		
W4A	-10.67	8/6/96	929			67.1 2078	8690 121718	22.5 315.2	51.4 1444	22.5	9.868	11.803	6,533	1.73		
W4A	-10.67	9/4/96	927			59.6 1846	6280 87962	66.7 933.8	83.6 2347	22.2	9.620	12.358	6,840	3.29		
W4A	-10.67	10/9/96	931			34.1 1057	3390 47483	112 1564.5	44.6 1253	22.0	9.410	13.168	7,289	3.42		
W4A	-10.67	11/6/96	918			34.1 1057	4220 59108	76.0 1064.5	95.2 2674	22.1	9.233	13.063	7,231	4.75		
W4A	-10.67	12/17/96	922			34.9 1081	5490 76897	87.9 1231.3	34.2 962	22.3	9.512	12.796	7,083	1.89		
W4A	-10.67	1/14/97	942			18.5 572	1420 19890	15.5 217.1	40.7 1144	22.3	9.158	11.882	6,577	0.71		
W4A	-10.67	2/10/97	1050			20.0 618	2070 28994	44.4 621.9	88.9 2497	22.5	9.150	11.355	6,285	2.30		
W4A	-10.67	3/10/97	1054			30.2 934	2650 37118	11.3 158.3	47.0 1320	22.4	9.352	11.109	6,149	3.99		
W4A	-10.67	4/23/97	916			12.9 400	1420 19890	24.1 337.6	103 2898	22.2	9.185	12.486	6,911	4.23		
W4A	-10.67	5/28/97	917			15.9 493	904 12663	18.5 259.1	140 3943	21.4	8.952	11.715	6,485	4.96		
W4A	-10.67	6/17/97	915			10.1 314	270 3778	1.82 25.5	208 5842	21.5	8.782	11.766	6,513	3.78		
W4A	-10.67	7/15/97	907			12.2 377	219 3067	0.78 10.9	207 5811	21.7	8.716	11.466	6,347	4.35		
W4A	-10.67	8/26/97	924			19.1 590	482 6744	10.8 150.9	153 4300	21.5	8.713	12.843	7,109	1.76		
W4A	-10.67	9/23/97	1121			15.1 468	223 3125	0.66 9.2	166 4657	22.4	8.700	11.422	6,322	2.77		
W4A	-10.67	10/15/97	846			18.6 575	440 6163	3.33 46.6	180 5044	22.1	8.758	12.429	6,880	2.31		
W4A	-10.67	11/4/97	1002			16.2 501	343 4803	6.22 87.1	155 4356	22.2	8.736	12.735	7,049	1.37		
W4A	-10.67	12/16/97	905			15.5 480	293 4100	2.48 34.7	186 5230	22.1	8.633	14.763	8,172	0.88		
W4A	-10.67	1/5/98	1159			13.0 403	183 2565	0.39 5.5	185 5198	22.3	8.664	12.989	7,190	2.42		
W4A	-10.67	2/3/98	1016			13.8 429	168 2354	0.49 6.9	198 5572	22.2	8.644	12.699	7,029	2.07		
W4A	-10.67	3/10/98	1029			15.0 466	138 1927	0.27 3.8	229 6418	22.0	8.494	12.244	6,777	3.72		
W4A	-10.67	4/14/98	853			57.6 1784	1460 20450	4.10 57.4	80.8 2269	22.1	9.591	12.301	6,809	6.51		
W4A	-10.67	5/12/98	1023			16.4 508	295 4137	16.3 228.7	133 3735	22.2	8.830	11.953	6,616	2.86		
W4A	-10.67	6/2/98	1018			32.8 1017	636 8905	51.3 718.5	123 3452	22.3	8.731	12.631	6,992	2.43		
W4A	-10.67	7/14/98	1028			40.8 1263	1220 17088	89.1 1248.0	54.4 1528	22.4	9.049	13.985	7,741	11.10		
W4A	-10.67	8/11/98	1043			36.6 1133	863 12086	64.8 907.5	72.7 2041	22.1	8.865	13.675	7,569	4.20		
W4A	-10.67	9/15/98	1117			39.7 1229	852 11927	42.4 593.9	74.0 2078	22.1	8.675	16.214	8,975	4.02		
W4A	-10.67	10/13/98	954			32.4 1002	671 9398	24.8 347.5	84.1 2363	22.5	8.594	16.349	9,050	3.31		

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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)
W4A	-10.67	11/4/98	1027			24.3 754	351 4915	7.40 103.6	111 3126	21.4	8.589	14.069	7,788	0.82		
W4A	-10.67	12/16/98	1008			22.9 709	171 2390	0.10 1.4	152 4275	22.5	8.562	12.610	6,980	2.89		
W4A	-10.67	1/12/99	1043			22.2 689	166 2331	1.20 16.8	148 4151	22.3	8.517	13.298	7,361	2.23		
W4A	-10.67	2/3/99	1032			24.1 748	163 2281	0.76 10.6	147 4137	22.2	8.489	13.742	7,607	0.96		
W4A	-10.67	3/2/99	1034			21.0 651	147 2053	0.33 4.6	185 5187	22.2	8.485	13.464	7,453	2.61		
W4A	-10.67	4/6/99	1027			22.6 699	186 2602	1.41 19.7	154 4311	22.1	8.410	16.417	9,087	0.43		
W4A	-10.67	5/4/99	1032			20.1 623	133 1856	0.24 3.4	186 5230	22.3	8.481	13.090	7,246	3.74		
W4A	-10.67	6/2/99	1015			21.7 672	138 1927	0.17 2.4	169 4746	22.3	8.394	15.953	8,830	0.44		
W4A	-10.67	7/7/99	1050			23.5 728	102 1430	0.05 0.7	165 4637	22.4	8.424	14.622	8,094	1.44		
W4A	-10.67	8/25/99	1016			19.8 612	115 1611	0.12 1.7	177 4968	22.6	8.423	15.649	8,662	0.96		
W4A	-10.67	9/8/99	1026			22.6 700	110 1538	0.18 2.5	181 5069	22.1	8.419	17.130	9,482	0.57		
W4A	-10.67	10/6/99	1033			16.8 520	104 1450	0.13 1.8	179 5036	22.0	8.430	15.593	8,631	1.28		
W4A	-10.67	11/3/99	1047			18.9 587	126 1765	0.05 0.7	182 5106	22.1	8.476	14.857	8,224	1.21		
W4A	-10.67	12/15/99	1103			16.9 523	161 2255	0.19 2.7	170 4763	22.2	8.414	17.030	9,427	0.59		
W4A	-10.67	1/11/00	1039			17.3 537	111 1555	0.10 1.4	178 4996	22.1	8.493	13.748	7,610	3.49		
W4A	-10.67	2/14/00	1055			19.3 596	165 2310	0.30 4.2	185 5193	22.2	8.451	14.869	8,230	0.42		
W4A	-10.67	3/22/00	1105			17.4 539	148 2077	0.03 0.4	189 5311	22.1	8.419	15.798	8,745	0.95		
W4A	-10.67	4/12/00	1048			16.6 514	133 1863	0.05 0.7	185 5204	22.3	8.442	15.157	8,390	1.53		
W4A	-10.67	5/17/00	1025			16.7 517	100 1399	0.05 0.7	193 5426	22.1	8.390	17.298	9,575	0.99		
W4A	-10.67	6/6/00	1101			15.7 485	91 1269	0.13 1.8	198 5567	22.0	8.399	18.052	9,992	1.18		
W4A	-10.67	7/31/00	1050			16.3 505	591 8278	2.00 28.0	175 4907	22.1	8.667	15.429	8,540	4.89		
W4A	-10.67	8/30/00	1056			14.8 459	82 1154	0.08 1.1	196 5505	22.2	8.389	18.343	10,153	1.65		
W4A	-10.67	9/6/00	1037			15.4 477	74 1035	0.07 1.0	181 5089	22.7	8.376	19.021	10,529	1.62		
W4A	-10.67	10/25/00	1003			14.2 440	68 949	0.13 1.8	221 6196	22.3	8.388	18.033	9,982	1.52		
W4A	-10.67	11/14/00	1117			14.2 440	691 9672	0.19 2.7	135 3792	22.5	8.607	15.792	8,741	4.94		
W4A	-10.67	12/19/00	1019			13.4 415	255 3572	0.75 10.5	153 4297	22.0	8.466	16.494	9,130	0.48		
W4A	-10.67	1/24/01	1011			12.6 392	132 1847	0.17 2.4	181 5092	22.0	8.395	18.163	10,054	1.07		
W4A	-10.67	2/7/01	1040			12.4 385	116 1621	0.21 2.9	177 4980	22.2	8.432	17.336	9,596	1.49		
W4A	-10.67	3/12/01	1025			12.8 396	100 1398	0.04 0.6	185 5207	22.4	8.377	16.187	8,960	1.12		
W4A	-10.67	4/18/01	1015			12.8 397	91 1268	0.21 2.9	184 5165	22.1	8.381	16.488	9,127	1.94		
W4A	-10.67	5/14/01	852			12.6 390	87 1223	0.27 3.8	193 5418	22.1	8.388	17.479	9,675	1.93		
W4A	-10.67	6/13/01	1033			13.4 416	85 1188	0.06 0.8	197 5544	22.3	8.371	18.040	9,986	1.03		
W4A	-10.67	7/25/01	952			12.2 377	70 986	1.07 15.0	201 5648	22.4	8.364	16.826	9,314	1.53		
W4A	-10.67	8/20/01	934			12.0 371	75 1053	0.19 2.7	208 5836	22.2	8.396	17.335	9,595	1.46		
W4A	-10.67	9/18/01	925			12.3 382	73 1026	0.16 2.2	211 5915	22.3	8.365	17.724	9,811	1.71		

NELHA Water Quality Laboratory

Well 4A Data Table

6/27/1980 - 12/31/2005

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)
W4A	-10.67	10/9/01	1017			12.2 378	70 978	0.07 1.0	204 5718	22.3	8.371	18.194	10,071	2.25		
W4A	-10.67	11/6/01	925			11.2 345	64 891	0.06 0.8	230 6448	22.4	8.374	18.185	10,066	2.82		
W4A	-10.67	12/18/01	932			12.0 372	70 979	0.26 3.6	218 6123	22.3	8.409	16.414	9,086	2.76		
W4A	-10.67	1/8/02	949			11.8 365	68 952	0.05 0.7	214 6005	22.1	8.382	17.534	9,706	1.80		
W4A	-10.67	2/27/02	947			13.3 412	113 1584	10.1 141.5	130 3648	22.1	8.597	17.124	9,479	0.68		
W4A	-10.67	3/19/02	959			20.3 629	829 11614	844 11826	129 3615	22.7	8.040	15.008	8,307	7.15		
W4A	-10.67	4/9/02	948			11.4 353	15 216	25.4 355.8	100 2809	22.1	8.631	16.421	9,089	0.17		
W4A	-10.67	5/21/02	945			10.7 331	37 521	3.56 49.9	143 4013	22.2	8.468	17.068	9,448	0.58		
W4A	-10.67	6/18/02	1005			10.5 326	50 702	0.50 7.0	161 4522	22.2	8.434	17.050	9,438	0.73		
W4A	-10.67	7/17/02	944			10.8 333	78 1096	0.09 1.3	168 4727	23.0	8.015	15.934	8,820	1.45		
W4A	-10.67	8/22/02	1009			10.1 313	70 975	4.98 69.8	111 3103	22.1	8.578	17.929	9,924	0.60		
W4A	-10.67	9/24/02	1003			9.38 291	56 784	0.98 13.7	141 3960	22.3	8.517	17.064	9,445	0.92		
W4A	-10.67	10/16/02	1016			9.34 289	69 969	0.28 3.9	143 4022	22.6	8.491	16.140	8,934	1.00		
W4A	-10.67	11/6/02	1000			9.20 285	106 1479	0.35 4.9	140 3932	22.6	8.465	17.147	9,491	0.61		
W4A	-10.67	12/19/02	1032			7.41 230	67 937	0.06 0.8	217 6092	22.0	8.448	17.196	9,518	1.09		
W4A	-10.67	1/22/03	1019			8.36 259	51 718	0.03 0.4	222 6229	21.9	8.405	19.296	10,681	2.52		
W4A	-10.67	2/20/03	946			8.60 266	72 1003	0.10 1.4	189 5317	22.3	8.459	15.959	8,834	2.42		
W4A	-10.67	3/18/03	925			9.12 282	71 992	0.18 2.5	211 5923	22.5	8.463	15.572	8,620	2.44		
W4A	-10.67	4/29/03	936			9.22 286	78 1090	0.21 2.9	226 6347	22.1	8.499	14.688	8,130	3.64		
W4A	-10.67	5/13/03	1012			9.51 295	70 979	0.31 4.3	211 5937	22.3	8.463	16.139	8,933	2.07		
W4A	-10.67	6/5/03	935			9.54 295	70 986	0.27 3.8	194 5454	22.2	8.442	16.578	9,176	1.62		
W4A	-10.67	7/31/03	958			9.29 288	78 1095	0.35 4.9	223 6252	22.0	8.412	16.552	9,162	1.87		
W4A	-10.67	8/27/03	1013			8.82 273	64 901	0.75 10.5	254 7134	22.2	8.359	18.582	10,286	2.10		
W4A	-10.67	9/17/03	942			9.92 307	59 824	0.30 4.2	199 5575	22.7	8.370	19.061	10,551	1.92		
W4A	-10.67	10/7/03	937			9.68 300	73 1026	0.77 10.8	214 6005	22.7	8.398	16.856	9,330	NA		
W4A	-10.67	11/4/03	930			9.60 297	65 908	0.89 12.5	205 5758	22.6	8.425	16.525	9,147			
W4A	-10.67	11/14/03	1104							23.9			0	0.35		
W4A	-10.67	12/16/03	925			9.45 293	31 440	4.50 63.0	224 6294	22.5	8.353	17.399	9,631	0.51		
W4A	-10.67	1/27/04	944			9.98 309	89 1248	1.84 25.8	230 6460	22.2	8.404	15.999	8,856	0.57		
W4A	-10.67	2/10/04	935			9.80 304	74 1035	0.45 6.3	223 6257	22.3	8.378	16.869	9,337	0.79		
W4A	-10.67	3/15/04	944			9.98 309	74 1038	0.19 2.7	235 6589	22.6	8.415	16.191	8,962	0.96		
W4A	-10.67	4/21/04	855			10.11 313	74 1036	0.38 5.3	226 6342	22.3	8.377	17.280	9,565	1.03		
W4A	-10.67	5/12/04	850			9.62 298	66 918	0.16 2.2	227 6364	22.9	8.406	17.88	9,897	1.72		
W4A	-10.67	6/7/04	844			9.62 298	58 813	0.15 2.1	233 6533	22.3	8.391	18.35	10,157	2.08		
W4A	-10.67	7/8/04	951			9.52 295	59 821	0.09 1.3	244 6861	22.4	8.436	17.51	9,692	2.35		

NELHA Water Quality Laboratory

Well 4A Data Table

6/27/1980 - 12/31/2005

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)
W4A	-10.67	8/24/04	920			8.44 261	55 764	0.26 3.6	267 7485	22.3	8.391	18.47	10,224	2.92		
W4A	-10.67	9/28/04	942			9.18 284	131 1828	0.32 4.5	252 7083	22.6	8.385	17.76	9,831	2.20		
W4A	-10.67	10/5/04	1029			8.60 266	89 1252	0.24 3.4	249 6982	22.5	8.400	18.80	10,406	2.86		
W4A	-10.67	11/8/04	920			8.72 270	109 1530	0.210 2.9	255 7165	22.4	8.419	16.33	9,039	2.19		
W4A	-10.67	12/7/04	933			8.44 261	291 4082	20 280.1	198 5547	22.3	8.486	17.54	9,709	2.45		
W4A	-10.67	1/11/05	923			7.86 243	149 2090	4.5 62.5	217 6106	22.4	8.485	16.889	9,348	0.69		
W4A	-10.67	2/8/05	927			7.90 245	133 1868	0.21 2.9	235 6600	22.4	8.502	15.429	8,540	1.18		
W4A	-10.67	3/16/05	959			7.97 247	108 1513	0.16 2.2	224 6302	22.2	8.446	16.765	9,280	0.68		
W4A	-10.67	4/18/05	1014			9.90 307	121 1700	66 924.4	207 5814	22.6	8.418	16.754	9,274	1.07		
W4A	-10.67	5/24/05	924			8.08 250	81 1137	8.3 116.4	238 6676	22.8	8.364	15.491	8,575	0.49		
W4A	-10.67	6/13/05	945			8.40 260	53 748	0.12 1.7	234 6583	22.7	8.367	16.165	8,948	0.30		
W4A	-10.67	7/11/05	940			8.18 253	61 861	0.25 3.5	246 6906	22.9	8.369	17.679	9,786	1.63		
W4A	-10.67	8/10/05	905			8.04 249	61 861	4.37 61.2	250 7027	22.5	8.412	17.088	9,459	0.60		
W4A	-10.67	9/21/05	900			8.74 271	205 2867	0.13 1.8	243 6836	22.6	8.393	16.730	9,260	0.63		
W4A	-10.67	10/18/05	926			8.62 267	148 2076	0.17 2.4	248 6965	22.4	7.913	16.384	9,069	0.70		
W4A	-10.67	11/3/05	845			8.14 252	567 7947	8.7 121.9	213 5988	22.5	8.468	16.548	9,160	4.87		
W4A	-10.67	12/21/05	956			7.42 230	129 1800	0.22 3.1	225 6314	23.0	8.416	18.320	10,141	0.98		
W4A	-10.67	1/24/06	905			7.36 228	106 1478	0.27 3.8	231 6477	22.3	8.419	16.176	8,954	2.45		
W4A	-10.67	2/15/06	858			7.75 240	100 1405	0.23 3.2	227 6367	22.3	8.405	17.256	9,552	0.91		
W4A	-10.67	3/21/06	845			7.73 239	88 1237	0.16 2.2	242 6797	22.4	8.392	17.275	9,562	1.17		
W4A	-10.67	4/19/06	952			8.47 262	83 1158	0.30 4.2	239 6712	22.4	8.433	17.105	9,468	1.39		
W4A	-10.67	4/26/06	900			7.80 242	80 1119	0.20 2.8	243 6825	22	8.417	17.387	9,624	1.8		
W4A	-10.67	5/3/06				8.13 252	79 1102	0.86 12.0	240 6741	22.1	8.419	18.149	10,046	2.1		
W4A	-10.67	5/10/06				7.89 244	78 1097	0.05 0.7	246 6909	22.1	8.402	17.256	9,552	1.48		
W4A	-10.67	5/16/06				8.02 248	79 1101	0.16 2.2	247 6937	22	8.436	16.938	9,376	2.12		
W4A	-10.67	5/23/06	932			7.30 226	78 1098	0.09 1.3	240 6741	22.5	8.429	16.358	9,055	1.97		
W4A	-10.67	6/27/06	937			7.94 246	66 922	0.34 4.8	251 7049	22.4	8.382	18.833	10,425	2.05		
W4A	-10.67	7/18/06	932			7.81 242	65 906	0.84 11.8	250 7021	22.5	8.414	17.616	9,751	2.62		
W4A	-10.67	8/8/06	910			7.88 244	66 930	0.05 0.7	256 7190	22.2	8.402	18.056	9,994	2.15		
W4A	-10.67	9/19/06	1010			7.73 239	64 902	0.24 3.4	251 7049	22.6	8.377	18.074	10,004	2.05		
W4A	-10.67	10/24/06	948			7.74 240	61 847	0.44 6.2	270 7583	22.6	8.375	18.890	10,456	2.18		
W4A	-10.67	11/28/06	929			7.19 223	56 784	0.26 3.6	281 7892	22.2	8.372	18.680	10,340	2.82		
W4A	-10.67	12/12/06	924			7.42 230	55 765	0.31 4.3	286 8032	22.1	8.364	18.872	10,446	2.66		
W4A	-10.67	1/9/07	950			7.77 241	56 790	0.24 3.4	270 7583	22.1	8.391	18.726	10,365	3.07		
W4A	-10.67	2/22/07	931			7.61 236	66 922	0.30 4.2	294 8257	22.1	8.409	16.421	9,089	3.39		

NELHA Water Quality Laboratory

Well 4A Data Table

~~6/27/1980 - 12/31/2005~~

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)
W4A	-10.67	3/6/07	948			7.65 237	63 884	0.25 3.5	290 8145	22	8.417	16.983	9,401	2.46		
W4A	-10.67	4/11/07	1101			7.86 243	66 930	0.20 2.8	301 8454	22.5	8.449	15.289	8,463	3.26		
W4A	-10.67	5/3/07	934			7.77 241	64 889	0.20 2.8	276 7752	22.6	8.438	16.645	9,213	2.24		
W4A	-10.67	6/19/07	901			7.77 241	64 898	0.25 3.5	296 8313	22.6	8.418	18.300	10,130	2.77		
W4A	-10.67	7/25/07	1423	-6.91	0.64 High	7.64 237	59 824	0.44 6.2	342 9614	22.9	8.30	19.11	10,578	3.43		
W4A	-10.67	8/28/07	930	-7.32	0.00 Low	7.06 219	70 983	0.55 7.7	404 11354	22.9	8.20	16.48	9,122	2.48		
W4A	-10.67	9/13/07	1220	-7.01	0.15 Flood	7.88 244	64 894	0.71 9.9	372 10449	22.9	8.32	17.41	9,637	3.04		
W4A	-10.67	10/24/07	948	-7.01	0.09 Low	6.21 192	78 1088	5.14 72.0	413 11590	22.7	8.16	15.21	8,419	4.11		
W4A	-10.67	11/26/07	1319	-6.99	0.06 Low	6.85 212	87 1213	1.45 20.4	470 13190	22.7	8.26	14.33	7,932	4.26		
W4A	-10.67	12/20/07	1009	-7.16	0.23 Low	6.31 195	90 1257	0.98 13.7	386 10833	22.4	8.36	12.63	6,991	4.94		
W4A	-10.67	1/29/08	936	-7.06	0.24 Ebb	5.47 169	83 1167	0.59 8.2	364 10213	22.5	8.15	11.97	6,626	4.62		
W4A	-10.67	2/27/08	1357	-6.71	0.06 Low	5.51 171	87 1216	1.04 14.6	483 13565	22.8	8.14	11.58	6,410	4.77		
W4A	-10.67	3/20/08	1423	-7.29	0.30 Flood	5.82 180	67 936	0.28 3.9	349 9795	22.5	8.11	15.43	8,541	3.95		
W4A	-10.67	4/29/08	1038	-7.29	0.18 Flood	6.07 188	77 1082	0.09 1.2	412 11575	22.8	8.18	14.00	7,749	4.43		
W4A	-10.67	5/29/08	1120		0.37 Flood	6.84 212	523 7319	0.22 3.1	427 11982	23.3	8.26	13.04	7,218	3.28		
W4A	-10.67	6/10/08	1023	-7.21	0.30 Flood	6.81 211	283 3969	0.35 4.9	709 19913	23.0	8.14	14.90	8,248	2.25		
W4A	-10.67	6/19/08	1023	-6.71	0.12 Flood	5.86 181	245 3432	3.90 55	573 16106	23.1	8.04	14.98	8,292	2.13	17.5	
W4A	-10.67	7/24/08	1121	-6.91	0.43 Ebb	5.41 168	94 1311	0.20 2.8	339 9515	22.5	8.10	17.50	9,687	3.84		
W4A	-10.67	8/29/08	1657		0.67 Ebb	5.25 163	74 1030	0.92 13	343 9646	22.4	8.05	17.36	9,609	2.30		
W4A	-10.67	9/19/08	1119	-6.87	0.43 Ebb	1.59 49	37 523	0.41 5.8	295 8281	26.0	8.52	9.03	4,998		10.1	
W4A	-10.67	10/28/08	1016	-7.08	0.15 Ebb	18.89 585	555 7779	1.49 21	414 11632	25.7	8.49	12.60	6,974	3.51	3.8	
W4A	-10.67	11/13/08	1030	-7.03	0.09 Ebb	6.28 195	199 2788	0.57 8.0	472 13245	25.2	8.31	9.85	5,452	5.13	2.7	
W4A	-10.67	12/15/08	1115	-6.94	0.18 Ebb	4.96 154	156 2189	0.10 1.4	494 13888	25.0	8.23	10.09	5,585	5.71		
W4A	-10.67	1/22/09	931	-7.14	0.09 Low	5.41 168	105 1466	0.96 13.4	355 9982	24.3	8.17	15.64	8,657	4.04	4.9	
W4A	-10.67	2/24/09	902	-7.06	0.09 Ebb	5.31 165	50 699	0.49 6.9	384 10798	23.0	8.01	15.34	8,491	3.52	0.18	
W4A	-10.67	3/16/09	921	-7.11	0.12 Ebb	4.14 128	53 738	0.13 1.8	304 8550	23.8	7.84	15.83	8,762	3.82	7.0	
W4A	-10.67	4/20/09	1649	-6.97	0.24 Ebb	6.29 195	75 1054	0.81 11.4	370 10403	23.9	8.04	17.17	9,504	3.87	15.7	
W4A	-10.67	5/21/09	1522	-6.73	0.58 Ebb	5.07 157	56 782	0.26 3.6	400 11227	22.3	8.02	19.07	10,556	3.91	3.7	
W4A	-10.67	6/18/09	1244	-6.86	0.61 High	5.58 173	47 657	0.31 4.3	225 6321	22.3	8.07	20.09	11,120	4.13	1.84	
W4A	-10.67	7/14/09	744	-7.08	0.37 Flood	1.70 53	33 458	0.16 2.2	174 4895	22.0	8.20	19.78	10,949	3.90	4.36	
W4A	-10.67	8/19/09	958	-7.19	0.09 Flood	4.09 127	50 695	3.93 55.0	356 10005	22.2	7.99	20.43	11,309	3.57	3.97	
W4A	-10.67	9/24/09	820	-6.84	0.61 High	4.03 125	52 731	0.54 7.5	230 6455	22.0	8.27	19.58	10,838	3.94	0.55	
W4A	-10.67	10/22/09	1431	-7.13	0.37 Ebb	2.94 91	31 435	0.43 6.0	146 4106	22.4	8.04	19.19	10,622	3.23	0.70	
W4A	-10.67	11/16/09	1558	-7.12	0.21 High	4.18 129	49 681	0.86 12.1	448 12576	22.1	8.05	19.26	10,661	2.82	0.36	
W4A	-10.67	12/7/09	1532	-7.23	0.06 Low	6.30 195	377 5280	0.67 9.4	441 12386	22.8	8.07	16.26	9,000	3.05	0.82	

NELHA Water Quality Laboratory

Well 4A Data Table

6/27/1980 - 12/31/2025

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)
W4A	-10.67	1/5/10	1405	-7.21	0.00 Ebb	11.36 352	595 8340	36.41 510	277 7780	22.7	8.43	17.76	9,831	1.41	10.90	
W4A	-10.67	2/1/10	1348	-7.17	0.00 Ebb	10.43 323	419 5864	13.21 185	267 7491	22.6	8.42	17.34	9,598	0.70	3.21	
W4A	-10.67	3/9/10	1423	-7.20	0.15 High	10.94 339	147 2053	2.37 33	368 10339	22.0	8.33	15.19	8,408	1.38	3.70	
W4A	-10.67	4/6/10	1317	-7.14	0.15 High	8.90 276	134 1874	0.71 10	327 9195	21.9	8.30	16.72	9,255	1.95	1.61	
W4A	-10.67	5/11/10	1324	-6.88	0.46 Flood	5.88 182	77 1072	1.64 23.0	396 11117	22.1	8.22	19.66	10,882	2.95	0.24	
W4A	-10.67	6/15/10	1419	-6.97	0.15 Flood	7.30 226	116 1621	0.36 5.0	242 6807	22.1	8.16	20.13	11,142	2.87	1.17	
W4A	-10.67	7/13/10	1331	-7.16	0.15 Flood	4.62 143	63 883	0.79 11.0	390 10951	21.9	8.12	20.05	11,098	3.22	0.30	
W4A	-10.67	8/3/10	1328	-6.76	0.49 Ebb	4.75 147	51 717	0.36 5.0	405 11369	22.0	8.11	20.76	11,491	3.64	0.26	
W4A	-10.67	9/14/10	1337	-6.86	0.40 Ebb	5.36 166	56 785	0.43 6.0	406 11403	22.0	8.07	20.36	11,270	3.51	3.42	
W4A	-10.67	10/12/10	1416	-6.98	0.30 Ebb	4.65 144	51 715	0.49 6.9	419 11757	21.8	8.08	20.44	11,314	3.75	1.72	
W4A	-10.67	11/16/10	1305	-6.86	0.40 High	4.58 142	56 778	0.46 6.5	420 11794	21.8	8.08	21.81	12,072	3.39	1.48	
W4A	-10.67	12/14/10	1335	-6.95	0.24 Ebb	4.78 148	63 882	0.26 3.7	426 11971	21.7	8.11	18.72	10,362	3.76	3.57	
W4A	-10.67	1/4/11	1317	-7.12	0.06 Flood	6.55 203	171 2396	0.22 3.1	360 10118	21.8	8.14	17.08	9,454	2.47	2.11	
W4A	-10.67	2/1/11	1038	-7.10	0.03 Low	6.26 194	120 1679	0.30 4.2	439 12320	22.0	8.10	15.47	8,563	3.79	2.30	
W4A	-10.67	4/5/11	1344	-7.11	0.12 Flood	5.49 170	88 1226	0.96 13.4	385 10802	21.2	8.16	15.51	8,585	3.00	4.23	
W4A	-10.67	7/12/11	1337	-6.84	0.61 Flood	5.13 159	66 920	0.24 3.3	425 11949	22.0	8.17	18.93	10,478	3.59	3.63	
W4A	-10.67	10/11/11	1513	-6.82	0.46 High	5.23 162	59 830	0.42 5.9	443 12439	20.1	8.08	18.09	10,013	3.68	0.67	
W4A	-10.67	1/10/12	1410	-7.19	0.03 Flood	4.97 154	79 1100	0.39 5.5	470 13210	22.7	8.07	12.54	6,941	5.32	6.34	
W4A	-10.67	5/1/12	1415	-6.80	0.40 Ebb	5.62 174	62 870	0.25 3.5	499 14020	22.6	8.05	17.55	9,714	4.60	0.49	
W4A	-10.67	7/18/12	1340	-6.88	0.52 Flood	5.10 158	72 1012	0.55 7.7	521 14646	22.4	8.00	16.61	9,194	5.26	1.16	
W4A	-10.67	10/16/12	1312	-7.10	0.15 Flood	4.84 150	70 983	0.35 4.9	493 13853	22.3	8.05	16.33	9,039	7.93	0.48	
W4A	-10.67	1/8/13	1422	-6.97	0.21 High	4.26 132	86 1206	0.54 7.5	590 16559	22.4	7.88	13.06	7,229	5.41	0.64	
W4A	-10.67	4/9/13	1355	-6.98	0.30 Flood	4.81 149	77 1084	0.47 6.6	547 15353	22.5	8.02	13.64	7,550	4.72	0.98	
W4A	-10.67	7/17/13	1516	-6.77	0.52 Ebb	4.52 140	61 859	0.51 7.2	471 13220	23.0	7.92	16.46	9,111	4.54	0.45	
W4A	-10.67	10/15/13	1356	-6.74	0.55 High	4.65 144	78 1099	0.82 11.5	514 14449	22.5	7.96	14.72	8,148	5.47	1.12	
W4A	-10.67	1/15/14	1343	-7.13	0.12 Flood	4.81 149	78 1091	0.69 9.6	485 13635	22.6	8.02	13.25	7,334	5.97	1.87	
W4A	-10.67	4/29/14	1453	-6.88	0.49 Flood	3.81 118	55 768	0.71 10.0	447 12543	22.4	7.95	17.23	9,537	5.18	0.49	
W4A	-10.67	7/29/14	1421	-7.01	0.30 Flood	3.94 122	63 888	1.50 21.0	507 14245	22.8	7.88	16.76	9,277	4.73	0.12	
W4A	-10.67	11/5/14	1409	-6.84	0.38 Flood	4.91 152	67 940	0.46 6.4	460 12907	22.8	7.97	16.49	9,128	4.72	0.72	
W4A	-10.67	2/11/15	1015	-6.95	0.24 Ebb	5.41 168	91 1279	0.73 10.2	674 18930	22.6	7.94	14.24	7,882	5.22	0.69	
W4A	-10.67	5/20/15	1138	-7.36	0.00 Flood	4.54 141	79 1107	1.46 20.5	474 13309	23.0	8.05	13.87	7,677	5.57	1.46	
W4A	-10.67	7/22/15	917	-6.93	0.30 Ebb	4.48 139	58 813	0.05 0.7	448 12581	22.9	7.93	15.72	8,701	5.49	0.48	
W4A	-10.67	11/9/15	1434	-6.77	0.48 High	4.23 131	67 937	0.22 3.1	518 14539	22.9	8.02	16.71	9,249	4.56	0.99	
W4A	-10.67	1/27/16	1224	-7.15	0.08 Low	4.51 140	93 1305	0.10 1.4	505 14184	23.0	7.92	13.64	7,550	5.28	0.93	
W4A	-10.67	4/22/16	931	-7.13	-0.05 Low	4.01 124	66 930	1.24 17.3	471 13222	22.9	7.94	15.95	8,829	4.62	0.42	

NELHA Water Quality Laboratory

Well 4A Data Table

~~6/27/1980 - 12/31/2005~~

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)
W4A	-10.67	7/27/16	914	-6.93	0.10 Flood	3.08 96	64 891	0.22 3.1	443 12442	22.6	7.90	16.56	9,166	4.96	0.62	
W4A	-10.67	11/10/16	941	-6.97	0.40 Flood	3.36 104	64 894	0.26 3.6	426 11953	22.5	7.80	15.82	8,757	4.99	0.87	
W4A	-10.67	3/22/17	1239	-6.88	0.25 High	3.51 109	52 735	0.28 3.9	471 13219	23.0	7.88	18.60	10,296	4.40	4.30	
W4A	-10.67	4/19/17	1122	-6.97	0.20 Ebb	3.22 100	57 799	0.31 4.4	504 14155	21.8	7.90	17.83	9,869	3.68	1.12	
W4A	-10.67	8/9/17	1342	-6.97	0.30 Flood	3.03 94	37 525	0.05 0.7	466 13096	23.0	7.89	18.63	10,312	4.52	0.22	
W4A	-10.67	10/18/17	1150	-6.97	0.30 Flood	3.37 104	66 924	0.39 5.4	500 14055	23.0	7.92	16.63	9,205	5.22	0.56	
W4A	-10.67	1/18/18	918	-6.83	0.20 Ebb	3.49 108	66 930	0.27 3.8	508 14261	22.6	7.88	16.57	9,172	5.05	0.50	
W4A	-10.67	5/10/18	928	-7.12	0.18 Flood	4.27 132	88 1232	0.10 1.4	482 13533	21.4	7.96	18.16	10,052	4.82	0.82	
W4A	-10.67	8/30/18	1530	-6.91	0.34 Flood	3.42 106	70 980	0.12 1.7	526 14781	24.0	7.90	16.62	9,200	4.62	1.24	
W4A	-10.67	10/25/18	858	-6.83	0.11 Low	3.56 110	71 991	1.81 25.3	489 13726	23.0	7.88	16.35	9,050	5.49	1.10	
W4A	-10.67	2/8/19	903	-6.86	0.35 Ebb	3.69 114	103 1446	0.00 0.0	477 13399	22.2	7.76	16.91	9,360	5.92	0.44	
W4A	-10.67	5/15/19	1345	-6.85	0.40 Ebb	3.65 113	72 1004	0.11 1.6	483 13565	22.1	7.79	17.40	9,631	5.38	0.31	
W4A	-10.67	8/28/19	1323	-6.68	0.65 High	4.05 125	67 938	0.18 2.5	463 12998	22.5	7.91	16.86	9,332	5.49	0.91	
W4A	-10.67	10/11/19	912	-7.01	0.15 Flood	3.85 119	68 947	0.18 2.5	478 13418	22.7	7.94	15.75	8,718	5.58	0.35	
W4A	-10.67	2/4/20	1010	-7.03	0.22 Flood	4.31 133	93 1304	-0.04 -0.5	520 14604	22.9	7.97	13.81	7,644	5.56	0.44	
W4A	-10.67	6/3/20	1044	-6.98	0.35 Flood	2.56 79	55 769	0.32 4.5	416 11694	23.1	7.89	19.35	10,711	4.46	0.54	
W4A	-10.67	8/18/20	1344	-6.71	0.60 Flood	2.70 84	62 873	0.16 2.2	461 12937	23.0	7.95	18.00	9,963	4.66	0.31	
W4A	-10.67	12/10/20	901	-6.87	0.30 Flood	3.93 122	103 1444	0.17 2.4	483 13561	22.9	7.89	15.08	8,347	5.18	0.60	
W4A	-10.67	2/18/21	910	-6.86	0.28 Ebb	5.41 168	141 1970	0.13 1.8	455 12776	22.8	8.02	14.56	8,059	4.81	0.28	
W4A	-10.67	4/15/21	906	-7.06	0.05 Ebb	5.37 166	162 2267	0.10 1.4	483 13570	23.1	7.99	13.77	7,622	5.10	0.53	
W4A	-10.67	7/6/21	919	-7.17	0.10 Flood	4.92 152	101 1419	0.04 0.6	482 13538	23.1	8.00	14.38	7,960	5.56	0.34	
W4A	-10.67	11/8/21	1004	-6.73	0.45 Ebb	4.53 140	92 1293	0.46 6.4	484 13598	22.9	8.04	14.22	7,871	5.71	0.50	
W4A	-10.67	2/8/22	927	-6.93	0.28 Ebb	4.74 147	124 1736	0.09 1.3	579 16254	22.7	8.01	13.54	7,495	5.69	0.16	
W4A	-10.67	4/21/22	930	-7.15	0.10 Ebb	3.84 119	100 1397	0.00 0.0	524 14716	22.8	8.01	12.95	7,168	6.08	0.21	
W4A	-10.67	7/12/22	1037	-7.27	0.30 Flood	6.21 192	116 1627	-0.33 -4.6	556 15606	22.9	8.03	14.16	7,838	5.97	0.09	
W4A	-10.67	11/21/22	1124	-6.99	0.38 Flood	4.88 151	169 2372	0.04 0.5	426 11968	22.8	8.14	14.14	7,827	5.70	2.15	
W4A	-10.67	1/25/23	1335	-7.18	0.10 Flood	4.00 124	114 1598	0.09 1.3	493 13850	22.9	7.96	12.69	7,024	5.80	0.26	
W4A	-10.67	4/25/23	928	-7.17	0.10 Ebb	4.26 132	105 1468	0.05 0.7	508 14256	22.8	7.89	14.18	7,849	6.03	0.18	
W4A	-10.67	8/14/23	1013	-7.12	0.10 Flood	3.94 122	117 1634	-0.07 -1.0	621 17442	23.4	7.86	9.22	5,104	7.55	1.06	
W4A	-10.67	11/16/23	905	-6.59	0.50 Ebb	3.23 100	61 856	0.09 1.3	429 12053	22.5	7.85	16.61	9,194	5.43	0.18	192.7
W4A	-10.67	1/23/24	1415	-6.94	0.87 High	1.72 53	35 487	0.08 1.1	355 9978	22.5	7.88	15.07	8,342	5.73	0.08	178.0
W4A	-10.67	5/3/24	1112	-6.94	0.30 High	3.40 105	85 1189	-0.06 -0.8	489 13742	22.9	7.88	14.30	7,915	6.06	0.41	159.6
W4A	-10.67	7/31/24	942	-6.99	0.30 Flood	3.28 102	74 1042	0.43 6.0	491 13777	22.6	7.82	15.67	8,674	5.82	0.31	155.8
W4A	-10.67	12/10/24	1301	-6.81	0.40 High	3.01 93	89 1242	0.22 3.1	490 13772	22.9	7.88	13.92	7,705	6.07	0.38	213.4
W4A	-10.67	1/9/25	1109	-6.9	0.30 High	3.12 97	87 1219	0.26 3.7	473 13281	22.6	7.89	14.82	8,203	6.02	0.15	160.3

NELHA Water Quality Laboratory

Well 4A Data Table

6/27/1980 - 12/31/2025

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)
W4A	-10.67	5/13/25	1428	-6.82	0.20 Flood	3.25 101	86 1208	0.04 0.6	483 13554	22.6	7.90	15.32	8,480	7.90	0.23	147.2
W4A	-10.67	7/29/25	1103	-6.81	0.14 Low	2.83 88	69 968	0.14 2.0	444 12476	22.8	7.83	16.34	9,045	5.80	0.30	153.0
W4A	-10.67	12/17/25	1118	-6.7	0.30 High	3.89 120	93 1299	0.00 0.0	1240 34826	22.8	7.90	13.75	7,611	5.64	0.82	187.3
Mean				-6.98	0.27	10.71 332	296.25 4150	9.90 138.3	307 8618	22.3	8.33	15.76	8,695	2.77	1.87	171.9
Std. Dev.				0.16	0.18	8.96 277	863.51 12095	51.53 720.7	155 4357	0.7	0.35	2.17	1,298	1.87	3.01	22.2
Maximum				-6.59	0.87	67.09 2078	8690 121718	844.30 11825.9	1240 34826	26.0	9.87	21.81	12,072	11.10	17.50	213.4
Minimum				-7.36	-0.05	1.31 41	5 64	-0.33 -4.6	34 962	19.1	7.76	9.03	0	0.10	0.08	147.2
n				102	104	317 317	311 311	316 317	310 309	317	314	316	317	307	89	9