

# Refuge's Enhanced Water Quality Program Monthly Sampling

*October 2009 – December 2009 Data Update*

Posted June 1, 2010

*by:*

**Matt Harwell**

**A.R.M. Loxahatchee National  
Wildlife Refuge**

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**A.R.M. Loxahatchee National Wildlife Refuge  
Enhanced Water Quality Monitoring Network**

Parameter Information:

<b>Parameter</b>	<b>Units</b>	<b>Analysis Method</b>	<b>MDL</b>
Alkalinity as CaCO <sub>3</sub> , Total	mg/L	310.1	1.9
Calcium Dissolved	mg/L	200.7	0.014
Carbon, Dissolved Organic	mg/L	415.1	0.5
Carbon, Total Organic	mg/L	415.1	0.5
Chloride	mg/L	300.0	0.052
Conductivity (field)	uMHOS/cm	120.1 (field)	-
Nitrate + Nitrite as Nitrogen	mg/L	300.0	0.004
Nitrogen, Total Kjeldahl (TKN)	mg/L	351.2	0.1
Ortho-phosphate as Phosphorus	mg/L	365.1	0.003
Oxygen, Dissolved (Field)	mg/L	360.1	1
pH (Field)	pH units	150.1	-
Phosphorus, Total	mg/L	365.3	0.003
Silica	mg/L	370.1	0.068
Solids, Total Dissolved (TDS)	mg/L	160.1	4.7
Solids, Total Suspended (TSS)	mg/L	160.2	1.6
Sulfate	mg/L	300.0	0.16
Temperature (Field)	DEG C	170.1	-
Turbidity	NTU	180.1	0.17

Note: Nitrate and Nitrite not analyzed after June 2006

A.R.M. Loxahatchee National Wildlife Refuge  
Enhanced Water Quality Monitoring Network

Oct-09

Site	Sample Date	Full(F), Partial(P), None(N), Reanalyzer (R)	Depth <sup>1</sup> meter	Total Depth <sup>2</sup> meter	DCS <sup>3</sup> meter	Alkalinity mg/l	Calcium Dissolved mg/l	Carbon, Dissolved Organic mg/l	Carbon, Total Organic mg/l	Chloride mg/l	Conductivity (Field) µMHSO/cm	Nitrate + Nitrite as Nitrogen mg/l	Nitrogen, Total Kjeldahl (TKN) mg/l	Ortho- phosphate as Phosphorus mg/l	Oxygen, Dissolved (Field) mg/l	pH (Field) pH units	Phosphorus, Total mg/l	Silica mg/l	Solids, Total Dissolved (TDS) mg/l	Solids, Total Suspended (TSS) mg/l	Sulfate mg/l	Temperature (Field) DEG C	Turbidity NTU
A101	10/20/2009	F	0.1	0.21	0.26	140	38.1	27	29	56	442	U	1.60	U	3.9	6.9	0.010	11	300	2.0	1.8	20.1	0.5
A102	10/20/2009	P	0.08	0.16	0.23	-	-	-	-	32	237	-	-	-	4.7	6.6	0.006	-	-	2.0	1.2	20.1	-
A103	10/20/2009	P	0.08	0.17	0.2	-	-	-	-	38	237	-	-	-	2.2	6.6	0.012	-	-	3.0	0.8	20.4	-
A104	10/21/2009	F	-	-	>1M	190	61.9	31	32	130	841	U	1.70	U	5.2	7.7	0.027	19	520	5.3	36.0	24.2	2.4
A105	10/21/2009	F	0.1	0.2	0.36	230	67.7	48	48	170	1015	U	2.20	0.003	1.7	7.1	0.016	30	660	4.0	32.0	21.8	1.2
A106	10/21/2009	F	0.14	0.28	0.28	170	47.8	35	36	130	749	U	1.70	0.003	6.1	7.3	0.015	30	480	3.0	12.0	22.4	0.5
A107	10/21/2009	P	0.05	0.1	0.15	-	-	-	-	27	179	-	-	-	2.0	6.5	0.005	-	-	3.0	0.5	21.1	-
A108	10/20/2009	P	0.07	0.15	0.2	-	-	-	-	30	142	-	-	-	5.4	6.6	0.004	-	-	U	U	21.2	-
A109	10/21/2009	F	0.13	0.25	0.42	55	18.2	20	22	40	259	U	1.10	U	1.6	6.5	U	9	180	1.5	4.2	21.7	0.4
A110	10/21/2009	F	0.11	0.22	0.35	23	8.02	21	24	24	131	U	1.60	U	5.1	7.0	U	12	120	1.5	0.3	23.1	0.7
A111	10/21/2009	F	0.1	0.2	0.33	30	8.83	15	16	15	112	U	0.92	U	5.0	6.6	U	5	92	U	0.3	21.9	0.4
A112	10/21/2009	F	0.12	0.24	0.41	38	10.8	17	18	16	138	U	1.10	U	2.8	6.5	U	9	110	U	0.7	21.7	0.5
A113	10/21/2009	P	0.07	0.15	0.33	-	-	-	-	14	91	-	-	-	4.9	7.3	U	-	-	3.0	U	22.9	-
A114	10/21/2009	F	0.11	0.23	0.32	16	6.09	18	18	16	90	U	0.98	U	5.2	6.3	U	4	86	3.0	U	21.8	0.5
A115	10/22/2009	F	-	-	>1M	230	78.2	40	41	150	1065	0.044	2.20	0.018	4.5	7.7	0.026	27	670	3.0	80.0	24.7	1.5
A116	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A117	10/22/2009	F	0.18	0.37	0.4	120	35.4	30	30	63	456	U	1.40	U	1.3	6.8	0.005	15	290	2.5	8.3	22.4	0.5
A118	10/22/2009	F	0.2	0.4	0.48	32	9.91	19	18	16	122	U	0.83	U	2.2	6.5	0.004	10	110	2.5	0.8	22.0	0.4
A119	10/22/2009	F	0.2	0.41	0.53	27	8.48	19	19	15	107	U	1.10	U	6.1	6.9	0.006	13	91	3.5	0.3	23.4	0.4
A120	10/22/2009	F	0.15	0.31	0.48	14	4.93	16	16	14	83	U	1.10	U	6.6	7.1	U	5	66	6.0	0.2	22.9	1.1
A121	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A122	10/22/2009	F	0.19	0.38	0.45	160	48	31	32	71	562	U	1.40	U	0.8	6.7	0.005	16	350	4.5	11.0	22.4	0.5
A123	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A124	10/19/2009	F	0.18	0.37	0.58	56	19	22	22	49	265	-	1.10	U	2.3	6.4	0.010	13	200	2.7	0.7	20.5	0.4
A126	10/19/2009	F	0.2	0.4	0.51	130	44.2	26	25	98	604	-	1.40	U	5.2	7.1	U	18	390	2.0	14.0	20.3	0.7
A127	10/19/2009	F	0.13	0.27	0.47	20	7.62	21	21	20	110	-	1.30	U	8.2	6.7	U	8	120	3.0	U	22.5	0.6
A128	10/22/2009	F	0.11	0.22	0.26	15	5.56	20	20	15	92	U	1.10	U	4.5	6.5	U	4	83	2.0	U	23.9	0.5
A129	10/19/2009	F	-	-	>1M	160	54.5	29	29	130	783	0.018	2.00	U	4.4	7.2	0.025	15	490	7.0	34.0	23.8	1.9
A130	10/19/2009	F	0.16	0.32	0.43	52	16.5	20	19	19	167	-	1.40	U	2.4	6.2	0.009	9	140	4.5	0.9	20.4	0.5
A131	10/19/2009	F	0.17	0.34	0.44	33	10.5	19	17	13	111	-	1.30	U	4.7	6.7	U	7	100	2.5	0.5	22.1	0.7
A132	10/19/2009	F	-	-	>1M	180	60.7	32	32	140	845	-	2.20	U	4.6	7.1	0.036	15	520	7.5	38.0	24.5	2.4
A133	10/19/2009	F	0.1	0.21	0.4	57	17.1	23	22	25	203	-	1.30	U	3.8	6.7	0.025	7	160	8.0	1.2	22.0	1.9
A134	10/19/2009	F	0.16	0.32	0.39	50	15.4	19	18	18	158	-	1.10	U	4.8	6.8	0.003	6	130	2.5	1.5	21.8	0.5
A135	10/20/2009	F	0.5	-	>1M	180	61.8	33	33	140	872	0.029	2.20	U	3.1	7.4	0.036	16	550	5.0	39.0	23.2	2.3
A136	10/20/2009	F	0.15	0.3	0.34	94	29.8	26	27	50	346	U	1.50	U	2.2	6.5	0.015	10	240	2.5	2.3	20.3	0.4
A137	10/20/2009	F	0.1	0.2	0.33	50	16.1	22	21	19	168	U	1.20	U	2.6	6.4	0.006	8	130	4.5	0.7	20.1	0.4
A138	10/20/2009	P	0.08	0.17	0.24	-	-	-	-	15	123	-	-	-	3.8	6.5	U	-	-	3.0	0.4	19.5	-
A139	10/20/2009	P	0.1	0.19	0.21	-	-	-	-	15	98	-	-	-	5.5	6.7	0.006	-	-	3.0	U	19.8	-
A140	10/20/2009	P	0.09	0.18	0.25	-	-	-	-	15	127	-	-	-	6.2	6.7	0.011	-	-	2.0	0.5	20.3	-
A141	10/22/2009	F	0.46	0.93	>1M	100	30.8	24	25	54	389	U	1.30	U	1.4	6.8	0.008	14	240	3.0	9.0	22.3	0.6
Total			40																				
Full			29																				
Partial			8																				
None			3																				

<sup>1</sup>Field depth is one half of the tdepth (depth of the clear water column) and is only recorded if a sample is taken.

<sup>2</sup>Total depth is depth of the clear water column.

<sup>3</sup>DCS is the depth of the water column down to the consolidated substrate.

U indicates that the compound was analyzed for but not detected; see "LOXA\_Parameter\_Info" tab for table of MDLs.

\*\*\* indicates sample improperly processed for analysis

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Data from June 2004 to May 2006 available on DBHYDRO:

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Field notes are maintained by the Everglades Program Team at the A.R.M. Loxahatchee National Wildlife Refuge.

A.R.M. Loxahatchee National Wildlife Refuge  
Enhanced Water Quality Monitoring Network

Nov-09

Site	Sample Date	Full(F), Partial(P), None(N), Reanalyzer (R)	Depth <sup>1</sup> meter	Total Depth <sup>2</sup> meter	DCS <sup>3</sup> meter	Alkalinity mg/l	Calcium Dissolved mg/l	Carbon, Dissolved Organic mg/l	Carbon, Total Organic mg/l	Chloride mg/l	Conductivity (Field) µMHSO/cm	Nitrate + Nitrite as Nitrogen mg/l	Nitrogen, Total Kjeldahl (TKN) mg/l	Ortho-phosphate as Phosphorus mg/l	Oxygen, Dissolved (Field) mg/l	pH (Field) pH units	Phosphorus, Total mg/l	Silica mg/l	Solids, Total Dissolved (TDS) mg/l	Solids, Total Suspended (TSS) mg/l	Sulfate mg/l	Temperature (Field) DEG C	Turbidity NTU
A101	11/17/2009	P	0.10	0.19	0.21	-	-	-	-	72	394	-	-	-	6.8	7.1	0.008	-	-	2.0	2.6	23.4	-
A102	11/17/2009	P	0.07	0.15	0.18	-	-	-	-	34	222	-	-	-	6.6	7.1	0.007	-	-	2.0	1.4	21.9	-
A103	11/17/2009	P	0.06	0.12	0.21	-	-	-	-	34	135	-	-	-	5.1	7.2	0.009	-	-	9.0	0.9	22.3	-
A104	11/18/2009	F	0.50	-	>1M	183	56	28	29	140	838	0.081	1.80	0.003	5.3	7.6	0.037	19	510	3.0	31.0	23.8	2.8
A105	11/18/2009	P	0.08	0.15	0.28	-	-	-	-	170	930	-	-	-	3.6	7.0	0.013	-	-	4.0	14.0	21.8	-
A106	11/18/2009	P	0.06	0.12	0.06	-	-	-	-	89	523	-	-	-	5.2	7.3	0.008	-	-	2.0	3.3	24.8	-
A107	11/18/2009	N	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A108	11/17/2009	N	-	-	0.14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A109	11/18/2009	F	0.15	0.30	0.41	48	14	21	21	31	206	U	1.10	0.005	4.9	6.7	0.008	6	150	U	1.8	24.1	0.4
A110	11/18/2009	P	0.10	0.19	0.23	-	-	-	-	28	140	-	-	-	9.9	7.3	0.005	-	-	4.0	0.4	25.3	-
A111	11/18/2009	F	0.12	0.24	0.30	27	8	15	16	18	123	U	1.00	U	5.5	7.5	0.006	3	83	U	0.5	22.4	0.3
A112	11/18/2009	F	0.13	0.25	0.33	39	11	17	17	20	47	U	1.00	0.004	4.0	6.7	0.006	7	110	U	0.8	23.6	0.4
A113	11/18/2009	P	0.09	0.18	0.31	-	-	-	-	19	108	-	-	-	5.5	7.1	0.004	-	-	3.0	0.4	22.2	-
A114	11/18/2009	P	0.08	0.15	0.33	-	-	-	-	20	110	-	-	-	5.3	7.2	0.004	-	-	U	U	23.7	-
A115	11/19/2009	F	-	-	>1M	210	64	32	32	150	983	0.064	2.00	0.015	5.6	7.6	0.024	23	610	U	68.0	23.0	0.2
A116	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A117	11/19/2009	F	0.15	0.30	0.36	93	26	24	24	48	343	U	1.10	0.004	2.1	7.1	0.011	11	230	U	3.4	20.9	0.3
A118	11/19/2009	F	0.15	0.31	0.43	31	9	15	15	18	126	U	0.85	0.003	3.3	7.3	0.010	8	99	U	0.9	21.7	0.2
A119	11/19/2009	F	0.15	0.30	0.39	32	9	18	18	18	126	U	1.20	0.004	4.9	7.5	0.008	13	120	U	0.4	22.7	0.2
A120	11/19/2009	F	0.16	0.31	0.43	16	6	15	15	18	103	U	1.10	U	8.4	7.9	0.006	4	79	U	U	23.8	0.2
A121	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A122	11/19/2009	F	0.15	0.30	0.36	110	33	25	24	58	419	U	1.30	0.005	3.3	7.0	0.009	14	270	U	5.7	21.2	0.1
A123	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A124	11/16/2009	F	0.12	0.25	0.41	35	14	20	21	37	199	U	1.20	0.005	1.7	6.4	0.009	9	140	2.7	0.5	20.4	0.4
A126	11/16/2009	F	0.15	0.30	0.42	120	36	23	23	97	563	U	1.40	0.005	5.8	7.0	0.011	17	330	2.5	8.0	21.1	0.5
A127	11/16/2009	F	0.11	0.23	0.36	18	7	20	20	25	173	U	1.50	U	7.1	6.7	0.008	6	110	2.0	U	22.1	0.4
A128	11/19/2009	P	0.07	0.14	0.23	-	-	-	-	22	114	-	-	-	6.8	6.9	0.004	-	-	2.0	U	24.0	-
A129	11/16/2009	F	0.50	-	>1M	150	47	25	26	110	683	0.070	1.80	0.008	2.9	7.0	0.050	13	440	9.5	21.0	22.2	1.6
A130	11/16/2009	F	0.15	0.30	0.33	57	19	18	19	24	233	U	1.00	0.010	4.5	6.7	0.017	8	150	2.5	1.0	21.1	0.4
A131	11/16/2009	F	0.12	0.25	0.33	36	11	18	18	18	133	U	1.30	0.012	6.2	6.7	0.014	5	115	3.0	0.6	20.7	0.4
A132	11/16/2009	F	0.50	-	>1M	170	52	27	27	130	786	0.079	2.30	0.027	4.4	7.2	0.046	13	490	5.5	26.0	22.4	2.3
A133	11/16/2009	P	0.05	0.11	0.33	-	-	-	-	28	236	-	-	-	4.3	6.4	0.056	-	-	11.0	0.7	21.9	-
A134	11/16/2009	F	0.11	0.23	0.36	52	18	18	18	26	271	U	1.10	U	4.0	6.7	0.024	6	150	U	1.2	21.0	0.4
A135	11/17/2009	F	0.50	-	>1M	170	52	28	28	130	765	0.072	2.00	U	6.4	7.3	0.057	13	480	9.0	26.0	23.6	4.3
A136	11/17/2009	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A137	11/17/2009	F	0.11	0.22	0.28	50	15	20	20	25	179	U	1.20	U	6.8	6.9	0.015	8	130	U	1.0	22.8	0.4
A138	11/17/2009	P	0.05	0.11	0.19	-	-	-	-	22	149	-	-	-	6.8	6.9	0.006	-	-	4.0	0.5	24.5	-
A139	11/17/2009	P	0.05	0.10	0.15	-	-	-	-	21	128	-	-	-	7.6	7.1	0.006	-	-	2.0	U	25.6	-
A140	11/17/2009	P	0.09	0.18	0.22	-	-	-	-	20	142	-	-	-	5.8	7.1	0.010	-	-	5.0	0.6	23.2	-
A141	11/19/2009	F	0.45	0.92	>1M	82	24	20	20	44	315	U	1.10	0.004	1.5	6.7	0.015	13	210	U	4.6	21.3	0.5
Total			40																				
Full			21																				
Partial			13																				
None			6																				

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Enhanced Water Quality Monitoring Network

Dec-09

Site	Sample Date	Full(F), Partial(P), None(N), Reanalyzer (R) Units	Depth <sup>1</sup> meter	Total Depth <sup>2</sup> meter	DCS <sup>3</sup> meter	Alkalinity mg/l	Calcium Dissolved mg/l	Carbon, Dissolved Organic mg/l	Carbon, Total Organic mg/l	Chloride mg/l	Conductivity (Field) µMHSO/cm	Nitrate + Nitrite as Nitrogen mg/l	Nitrogen, Total Kjeldahl (TKN) mg/l	Ortho-phosphate as Phosphorus mg/l	Oxygen, Dissolved (Field) mg/l	pH (Field) pH units	Phosphorus, Total mg/l	Silica mg/l	Solids, Total Dissolved (TDS) mg/l	Solids, Total Suspended (TSS) mg/l	Sulfate mg/l	Temperature (Field) DEG C	Turbidity NTU
A101	12/8/2009	P	0.1	0.19	0.19	-	-	-	-	77	321	-	-	-	3.8	7.0	0.009	-	-	3.0	2.2	21.2	-
A102	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A103	12/8/2009	P	0.06	0.13	0.2	-	-	-	-	32	229	-	-	-	2.6	7.0	0.008	-	-	4.0	0.8	22.0	-
A104	12/9/2009	F	0.5	-	>1M	200	59	31	31	150	891	0.12	1.80	0.019	5.5	7.7	0.030	19	530	3.5	36.0	22.8	2.6
A105	12/9/2009	P	0.09	0.18	0.27	-	-	-	-	140	818	-	-	-	8.1	7.3	0.011	-	-	3.0	9.8	26.0	-
A106	12/9/2009	P	0.05	0.11	0.19	-	-	-	-	64	425	-	-	-	3.5	7.1	0.007	-	-	4.0	2.4	24.2	-
A107	-	N	-	-	0.11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A108	12/8/2009	P	0.05	0.1	0.12	-	-	-	-	33	163	-	-	-	5.1	6.9	0.006	-	-	5.0	U	24.6	-
A109	12/9/2009	F	0.14	0.28	0.33	44	14	20	20	29	194	U	1.10	0.004	6.2	6.9	0.004	4	130	U	1.6	25.2	0.5
A110	12/9/2009	P	0.06	0.13	0.2	-	-	-	-	27	143	-	-	-	8.2	7.2	0.011	-	-	5.0	U	27.6	-
A111	12/9/2009	P	0.08	0.16	0.38	-	-	-	-	19	127	-	-	-	4.6	6.5	U	-	-	7.0	0.5	24.6	-
A112	12/9/2009	F	0.12	0.25	0.31	38	11	16	15	19	149	U	0.92	0.011	4.5	6.7	0.005	4	110	2.0	0.7	24.8	0.5
A113	12/9/2009	P	0.07	0.14	0.28	-	-	-	-	20	116	-	-	-	7.7	7.0	0.017	-	-	3.0	0.4	26.4	-
A114	12/9/2009	P	0.06	0.13	0.26	-	-	-	-	21	125	-	-	-	7.3	6.9	U	-	-	4.0	U	26.5	-
A115	12/10/2009	F	0.5	-	>1M	190	58	30	30	140	898	0.052	1.80	0.007	6.0	7.6	0.028	20	580	3.0	61.0	23.2	1.9
A116	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A117	12/10/2009	F	0.12	0.25	0.37	81	23	21	21	37	291	U	0.99	0.003	2.3	6.9	0.009	9	200	U	2.8	24.8	0.5
A118	12/10/2009	F	0.12	0.25	0.4	31	10	15	15	19	129	U	0.77	0.004	2.3	6.5	0.004	7	110	U	1.1	22.7	0.7
A119	12/10/2009	F	0.12	0.24	0.35	32	9	19	19	19	133	U	1.10	0.005	4.8	7.0	0.005	12	120	U	U	24.9	0.6
A120	12/10/2009	F	0.17	0.35	0.44	21	6	15	15	20	112	U	1.00	0.004	7.4	6.9	0.027	3	96	U	U	25.7	0.6
A121	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A122	12/10/2009	F	0.13	0.26	0.32	100	30	24	24	52	366	U	1.10	0.003	2.0	6.9	0.009	12	250	U	5.0	23.2	0.8
A123	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A124	12/7/2009	F	0.13	0.26	0.57	37	33	19	19	33	182	0.016	0.98	0.011	4.8	7.0	0.013	6	120	U	0.4	24.0	0.4
A126	12/7/2009	P	0.09	0.19	0.39	-	-	-	-	89	485	-	-	-	5.9	7.3	0.008	-	-	2.0	3.1	24.6	-
A127	12/7/2009	P	0.09	0.18	0.38	-	-	-	-	27	143	-	-	-	6.3	7.2	0.005	-	-	4.0	U	26.0	-
A128	-	N	-	-	0.33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A129	12/7/2009	F	-	-	>1M	130	40	23	24	83	533	0.047	1.50	0.022	3.0	7.2	0.028	14	310	U	8.7	23.0	1.0
A130	12/7/2009	F	0.11	0.22	0.33	66	19	21	21	29	233	U	1.20	0.016	3.4	7.2	0.012	13	150	U	0.9	25.9	0.5
A131	12/7/2009	F	0.13	0.26	0.34	39	12	19	19	21	149	U	1.60	0.020	7.1	7.4	0.007	4	110	U	0.5	26.3	0.4
A132	12/7/2009	F	-	-	>1M	150	45	25	25	99	615	0.069	1.60	0.024	3.3	7.1	0.031	13	350	4.0	15.0	22.9	1.3
A133	12/7/2009	P	0.05	0.1	0.26	-	-	-	-	32	211	-	-	-	3.0	7.1	0.019	-	-	5.0	0.8	23.3	-
A134	12/7/2009	P	0.09	0.18	0.29	-	-	-	-	29	206	-	-	-	5.3	7.2	0.010	-	-	2.0	1.2	23.7	-
A135	12/8/2009	F	0.5	-	>1M	160	47	25	26	110	697	0.089	1.90	0.017	3.3	7.3	0.040	13	450	3.0	19.0	22.1	1.6
A136	12/8/2009	P	0.09	0.18	0.33	-	-	-	-	36	279	-	-	-	2.6	6.9	0.013	-	-	4.0	1.0	21.2	-
A137	12/8/2009	P	0.08	0.17	0.23	-	-	-	-	27	194	-	-	-	3.1	6.9	0.009	-	-	5.0	0.8	21.3	-
A138	12/8/2009	P	0.06	0.12	0.17	-	-	-	-	25	172	-	-	-	3.7	7.1	0.009	-	-	5.0	0.5	21.5	-
A139	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A140	12/8/2009	P	0.07	0.15	0.18	-	-	-	-	23	169	-	-	-	3.6	6.8	0.009	-	-	6.0	0.6	22.3	-
A141	12/10/2009	F	0.34	0.68	1.29	75	21	19	19	39	282	U	0.96	0.004	3.1	6.9	0.008	12	200	U	3.4	22.6	1.0
Total			40																				
Full			16																				
Partial			17																				
None			7																				

<sup>1</sup>Field depth is one half of the tdepth (depth of the clear water column) and is only recorded if a sample is taken.

<sup>2</sup>Total depth is depth of the clear water column.

<sup>3</sup>DCS is the depth of the water column down to the consolidated substrate.

U indicates that the compound was analyzed for but not detected; see "LOXA\_Parameter\_Info" tab for table of MDLs.

\*\*\* indicates sample improperly processed for analysis

Additional information on the Enhanced Water Quality Monitoring Network can be found at:

[http://sofia.usgs.gov/lox\\_monitor\\_model/wq\\_network.html](http://sofia.usgs.gov/lox_monitor_model/wq_network.html)

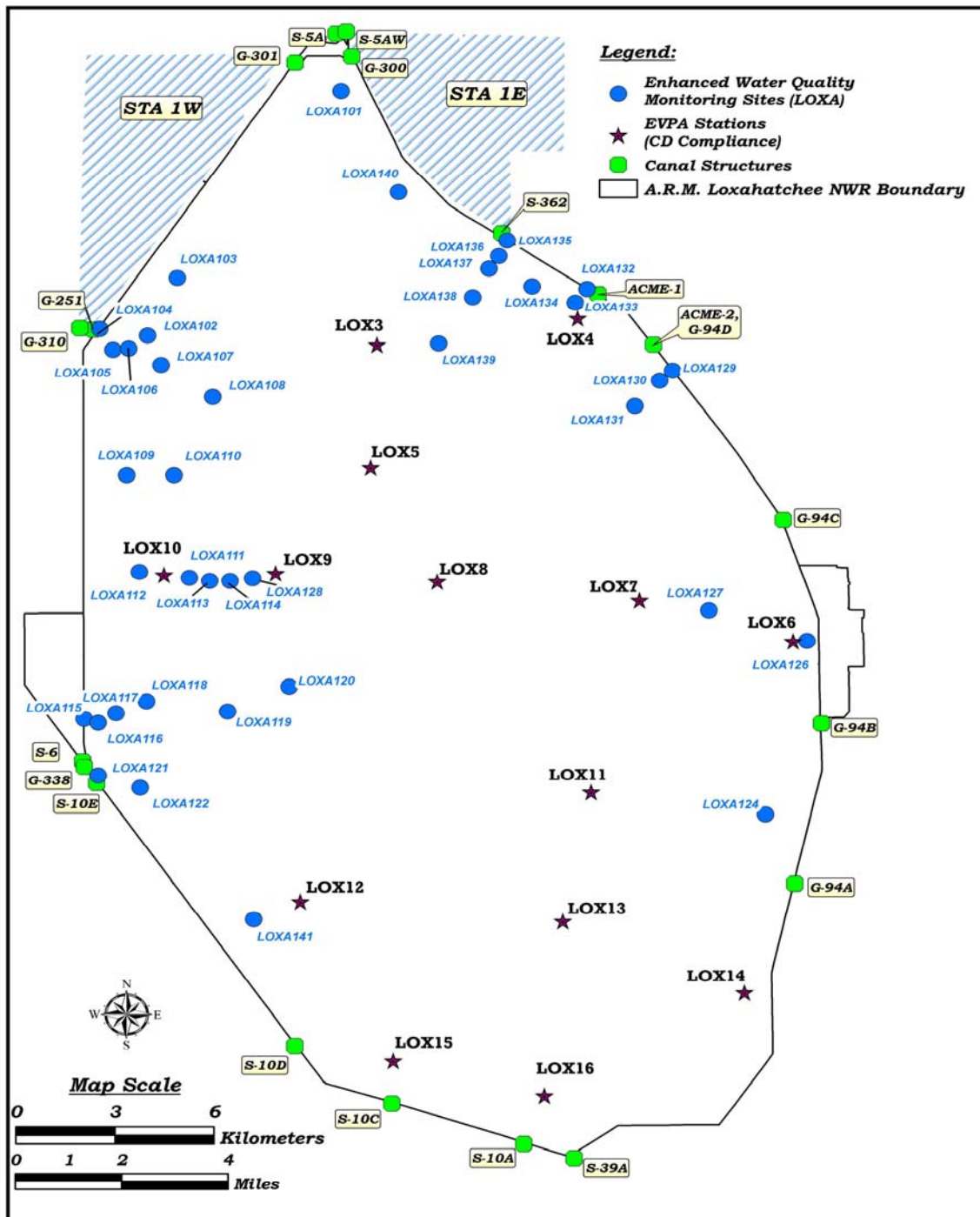
Data from June 2004 to May 2006 available on DBHYDRO:

<http://www.sfwmd.gov/org/ema/dbhydro/>

Field notes are maintained by the Everglades Program Team at the A.R.M. Loxahatchee National Wildlife Refuge.

# A.R.M. Loxahatchee National Wildlife Refuge Enhanced Water Quality Monitoring Network

Map of sites:



Coordinates of sites:

Name	Latitude	Longitude	X_DMS*	Y_DMS*	X_DM**	Y_DM**
LOXA101	26.667392489	-80.366364752	80° 21' 58.91" W	26° 40' 2.61" N	80° 21.9818333' W	26° 40.0435' N
LOXA102	26.595988767	-80.425537688	80° 25' 31.94" W	26° 35' 45.56" N	80° 25.532333' W	26° 35.7593333333333' N
LOXA103	26.612851423	-80.416436308	80° 24' 59.17" W	26° 36' 46.27" N	80° 24.98616667' W	26° 36.7711666666667' N
LOXA104	26.597981879	-80.440045081	80° 26' 24.16" W	26° 35' 52.73" N	80° 26.4026667' W	26° 35.8788333333333' N
LOXA105	26.591899226	-80.436094071	80° 26' 9.94" W	26° 35' 30.84" N	80° 26.1656667' W	26° 35.514' N
LOXA106	26.592206216	-80.431280960	80° 25' 52.61" W	26° 35' 31.94" N	80° 25.876833' W	26° 35.5323333333333' N
LOXA107	26.587390459	-80.421444676	80° 25' 17.20" W	26° 35' 14.61" N	80° 25.286667' W	26° 35.2435' N
LOXA108	26.577960101	-80.405853442	80° 24' 21.07" W	26° 34' 40.66" N	80° 24.35116667' W	26° 34.6776666666667' N
LOXA109	26.555288645	-80.432051570	80° 24' 55.39" W	26° 33' 19.04" N	80° 25.92316667' W	26° 33.3173333333333' N
LOXA110	26.555239734	-80.417691537	80° 25' 3.69" W	26° 33' 18.86" N	80° 25.0615' W	26° 33.3143333333333' N
LOXA111	26.525335828	-80.413147047	80° 24' 47.33" W	26° 31' 31.21" N	80° 24.7888333' W	26° 31.5201666666667' N
LOXA112	26.527124725	-80.428373322	80° 25' 42.14" W	26° 31' 37.65" N	80° 25.702333' W	26° 31.6275' N
LOXA113	26.524427841	-80.406998750	80° 24' 25.20" W	26° 31' 27.94" N	80° 24.42' W	26° 31.4656666666667' N
LOXA114	26.524392580	-80.400839654	80° 24' 3.02" W	26° 31' 27.81" N	80° 24.050333' W	26° 31.4635' N
LOXA115	26.484225781	-80.445336745	80° 26' 43.21" W	26° 29' 3.21" N	80° 26.7201667' W	26° 29.0535' N
LOXA116	26.483058602	-80.441097999	80° 26' 27.95" W	26° 28' 59.01" N	80° 26.4658333' W	26° 28.9835' N
LOXA117	26.485804269	-80.435685796	80° 26' 8.47" W	26° 29' 8.90" N	80° 26.14116667' W	26° 29.1483333333333' N
LOXA118	26.489289243	-80.426390912	80° 25' 35.01" W	26° 29' 21.44" N	80° 25.5835' W	26° 29.3573333333333' N
LOXA119	26.486214619	-80.401808449	80° 24' 6.51" W	26° 29' 10.37" N	80° 24.1085' W	26° 29.1728333333333' N
LOXA120	26.493410539	-80.383079866	80° 22' 59.09" W	26° 29' 36.28" N	80° 22.9848333' W	26° 29.6046666666667' N
LOXA121	26.467676727	-80.441132313	80° 26' 28.08" W	26° 28' 3.64" N	80° 26.468' W	26° 28.0606666666667' N
LOXA122	26.464042966	-80.428433669	80° 25' 42.36" W	26° 27' 50.55" N	80° 25.706' W	26° 27.8425' N
LOXA123	26.426753074	-80.400363722	80° 24' 1.31" W	26° 25' 36.31" N	80° 24.0218333' W	26° 25.6051666666667' N
LOXA124	26.455353967	-80.238754550	80° 14' 19.52" W	26° 27' 19.27" N	80° 14.325333' W	26° 27.3211666666667' N
LOXA126	26.506011481	-80.225851709	80° 13' 33.07" W	26° 30' 21.64" N	80° 13.55116667' W	26° 30.3606666666667' N
LOXA127	26.515134740	-80.255559757	80° 15' 20.02" W	26° 30' 54.49" N	80° 15.3336667' W	26° 30.9081666666667' N
LOXA128	26.525162864	-80.394012101	80° 23' 38.44" W	26° 31' 30.59" N	80° 23.6406667' W	26° 31.5098333333333' N
LOXA129	26.585007262	-80.266082555	80° 15' 57.90" W	26° 35' 6.03" N	80° 15.965' W	26° 35.1005' N
LOXA130	26.582118809	-80.270055306	80° 16' 12.20" W	26° 34' 55.63" N	80° 16.20333' W	26° 34.9271666666667' N
LOXA131	26.574747906	-80.277646525	80° 16' 39.53" W	26° 34' 29.09" N	80° 16.6588333' W	26° 34.4848333333333' N
LOXA132	26.609005614	-80.291899387	80° 17' 30.84" W	26° 36' 32.42" N	80° 17.514' W	26° 36.5403333333333' N
LOXA133	26.605089596	-80.295574907	80° 17' 44.07" W	26° 36' 18.32" N	80° 17.7345' W	26° 36.3053333333333' N
LOXA134	26.609856637	-80.308603250	80° 18' 30.97" W	26° 36' 35.48" N	80° 18.51616667' W	26° 36.5913333333333' N
LOXA135	26.623355381	-80.316122757	80° 18' 58.04" W	26° 37' 24.08" N	80° 18.967333' W	26° 37.4013333333333' N
LOXA136	26.618793017	-80.318666883	80° 19' 7.20" W	26° 37' 7.65" N	80° 19.12' W	26° 37.1275' N
LOXA137	26.615103372	-80.321703271	80° 19' 18.13" W	26° 36' 54.37" N	80° 19.30216667' W	26° 36.9061666666667' N
LOXA138	26.606816926	-80.326665374	80° 19' 36.00" W	26° 36' 24.54" N	80° 19.6' W	26° 36.409' N
LOXA139	26.593325251	-80.337153885	80° 20' 13.75" W	26° 35' 35.97" N	80° 20.22916667' W	26° 35.5995' N
LOXA140	26.637603226	-80.349094316	80° 20' 56.74" W	26° 38' 15.37" N	80° 20.9456667' W	26° 38.2561666666667' N
LOXA141	26.42708333	-80.39420	80° 23' 39.12" W	26° 38' 37.5" N	80° 23.652' W	26° 38.625' N

\* DMS = Degrees Minutes Seconds

\*\* DM = Degrees Minutes Decimal Minutes

Additional information on the coordinates for the Enhanced Water Quality Monitoring Network can be found at:

[http://sofia.usgs.gov/lox\\_monitor\\_model/workplans/EnhancedWQsamplingStations\\_.pdf](http://sofia.usgs.gov/lox_monitor_model/workplans/EnhancedWQsamplingStations_.pdf)