

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

**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° 25' 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

\* DMS = Degrees Minutes Seconds

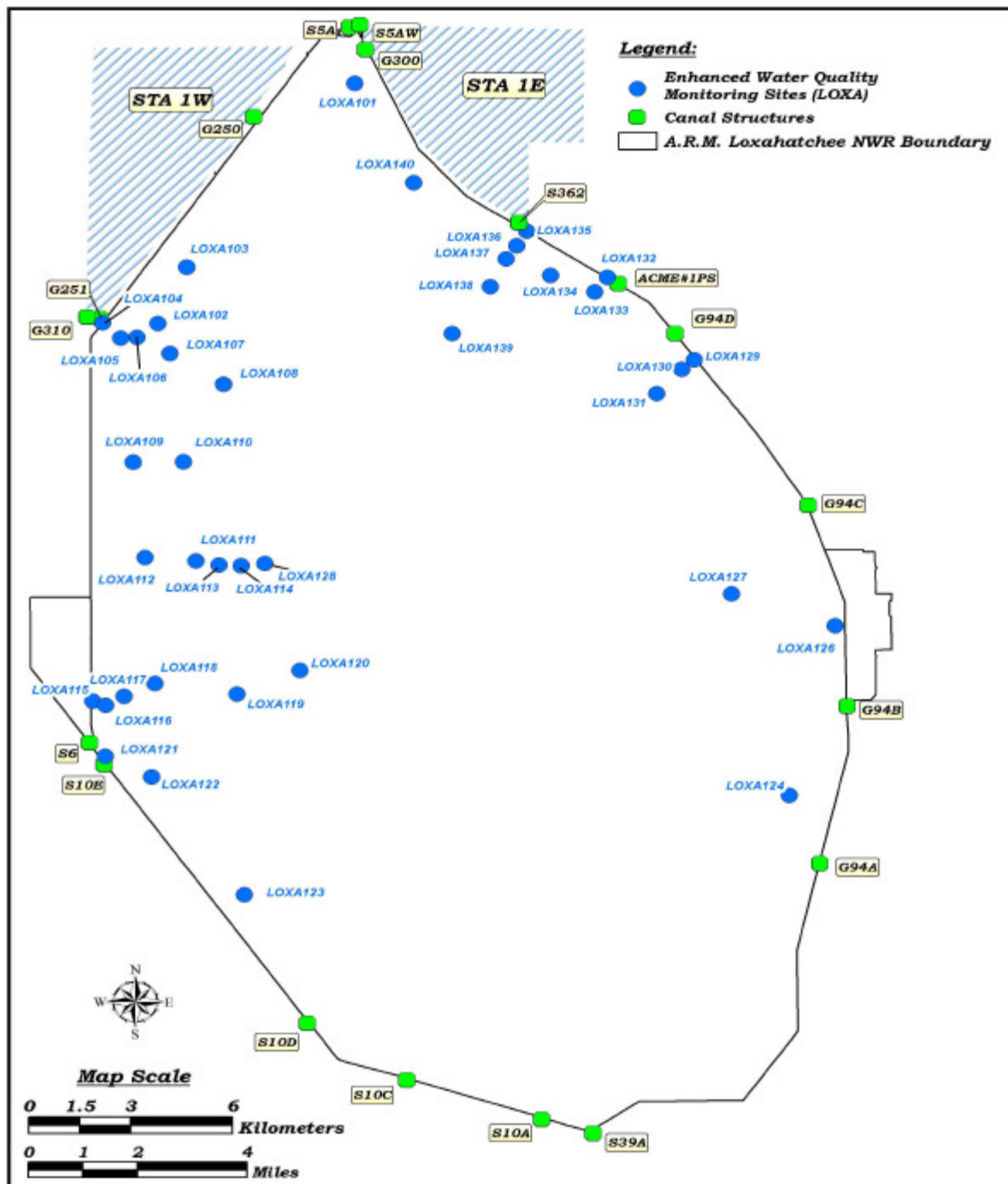
\*\* DM = Degrees Minutes Decimal Minutes

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)

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

Map of sites:



**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	0.02
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 as Nitrogen	mg/L	300.0	0.051
Nitrite as Nitrogen	mg/L	300.0	0.06
Nitrate + Nitrite as Nitrogen	mg/L	300.0	0.051
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

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Site	Sample Month	Collection Date	Sample - Full (F), Partial (P), None (N)	Field Depth (1) meter	Total Depth (2) meter	DCS meter	Alkalinity mg/L	Calcium Dissolved mg/L	Carbon, Dissolved Organic mg/L	Carbon, Total Organic mg/L	Chloride mg/L	Conductivity (field) µMHO/cm	Nitrate as Nitrogen mg/L	Nitrite as Nitrogen mg/L	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	Comments	
																												UNITS:
LOXA101	Jun-06	6/5/2006	N		n/a	0.01																						
LOXA102	Jun-06	6/5/2006	N		n/a	0.01																						
LOXA103	Jun-06	6/5/2006	N		n/a	0.01																						
LOXA104	Jun-06	6/5/2006	F	0.50	>1.00	>1.00	210	63	*	27	110	821			0.10	2.0	0.016	3.3	7.6	0.068	14	510	8.7	48.0	29.0	19		
LOXA105	Jun-06	6/5/2006	N		n/a	n/a																					did not land due to vegetation	
LOXA106	Jun-06	6/5/2006	N		n/a	0.01																						
LOXA107	Jun-06	6/5/2006	N		n/a	~.01																					did not land due to vegetation	
LOXA108	Jun-06	6/5/2006	N		0.01	0.06																						
LOXA109	Jun-06	6/6/2006	N		n/a	n/a																					did not land due to vegetation	
LOXA110	Jun-06	6/6/2006	N		n/a	n/a																					no visible standing water	
LOXA111	Jun-06	6/6/2006	N		n/a	n/a																					no visible water	
LOXA112	Jun-06	6/6/2006	N		n/a	n/a																						
LOXA113	Jun-06	6/6/2006	N		0.06	0.17																						
LOXA114	Jun-06	6/6/2006	N		n/a	n/a																					dry conditions, very shallow	
LOXA115	Jun-06	6/7/2006	F	0.50	>1.00	>1.00	190	56	*	23	99	750	0.09	U		1.6	U	4.4	7.8	0.036	20	480	4.0	45.0	29.1	7		
LOXA116	Jun-06	6/7/2006	N		0.04	0.56																						
LOXA117	Jun-06	6/7/2006	N		0.00	n/a																					did not land due to vegetation	
LOXA118	Jun-06	6/7/2006	N		0.03	0.23																						
LOXA119	Jun-06	6/7/2006	N		0.04	0.20																						
LOXA120	Jun-06	6/7/2006	P	0.09	0.18	0.35					56	308	0.10	U				3.6	6.9	0.008			2.5	U	27.3			
LOXA121	Jun-06	6/7/2006	N		0.00	n/a																					did not land due to vegetation	
LOXA122	Jun-06	6/7/2006	N		0.00	0.15																						
LOXA123	Jun-06	6/7/2006	N		0.01	0.80																						
LOXA124	Jun-06	6/6/2006	N		n/a	n/a																					water depth approx. 2 cm	
LOXA126	Jun-06	6/6/2006	N		n/a	n/a																					no visible water	
LOXA127	Jun-06	6/6/2006	N		0.02	0.13																						
LOXA128	Jun-06	6/7/2006	N		0.00	0.15																						
LOXA129	Jun-06	6/6/2006	F	0.50	>1.00	>1.00	180	70	*	19	62	592	0.12	U		1.6	0.004	3.2	7.1	0.071	5	350	8.7	19.0	28.4	8		
LOXA130	Jun-06	6/6/2006	P	0.07	0.14	0.24					75	467						1.6	7.0	0.009			U	1.5	24.8			
LOXA131	Jun-06	6/6/2006	P	0.06	0.12	0.22					44	287							7.6	0.008			2.5	2.3	25.7			
LOXA132	Jun-06	6/6/2006	F	0.50	>1.00	>1.00	170	57	*	25	35	715	U	U		2.3	0.002	3.5	7.2	0.064	7	430	10.0	16.0	28.6	9		
LOXA133	Jun-06	6/6/2006	N		n/a	n/a																					did not land due to vegetation	
LOXA134	Jun-06	6/6/2006	N		n/a	n/a																					site had low water around 2 cm	
LOXA135	Jun-06	6/5/2006	F	0.50	>1.00	>1.00	130	43	*	32	170	808		U		2.5	U	5.2	7.6	0.043	4	490	7.5	17.0	28.7	5		
LOXA136	Jun-06	6/5/2006	N		~.04	n/a																					did not land due to vegetation	
LOXA137	Jun-06	6/5/2006	P	0.07	0.15	0.25					47	280							2.8	7.0	0.011			U	1.8	26.9		
LOXA138	Jun-06	6/5/2006	N		0.04	0.08																						
LOXA139	Jun-06	6/5/2006	N		0.04	0.07																						
LOXA140	Jun-06	6/5/2006	N		0.01	0.03																						

Number of Full Samples: 5  
Number of Partial Samples: 4  
Number of No Samples: 30  
Total Sites: 39

(1) Field depth is one half of the tdepth (depth of the clear water column) and is only recorded if a sample is taken.  
(2) Total depth is depth of the clear water column.  
U indicates that the compound was analyzed for but not detected; see page 3 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.stwmd.gov/org/ema/dbhydro/>  
Field notes are maintained by the Everglades Program Team at the A.R.M. Loxahatchee National Wildlife Refuge.