Myakka River Watershed
Water Quality Monitoring Report

For Myakka River State Park

Sarasota County Stormwater Environmental Utility- July 31,2018 *(updated August 31, 2018)*

Introduction

The Myakka River is designated as a Florida "Wild and Scenic River" flowing almost 70 miles from the Hardee-Manatee county line to Charlotte Harbor and the Gulf of Mexico. Fourteen of these miles are located within Myakka River State Park, and more than half of the watershed is within Sarasota County. The river is also on the Florida Department of Environmental Protection's (FDEP) Group 3 Verified Impaired Waters List October 21, 2016 update (LINK). Total Maximum Daily Loads (TMDL) are required (EPA Integrated Report Category 5) and prioritized for various segments of the river system for the following parameters: Fecal Coliform, Iron, and Nutrients (total nitrogen, phosphorus and chlorophyll-a concentrations). Some segments of the river were delisted for high levels of Mercury in fish tissue, and for high nutrients.

Sarasota County Water Resources developed a Myakka River Watershed monitoring plan and staff direct water quality sampling and field measurements at twelve fixed sites along the Myakka River Watershed, with five sites on the Myakka River, two sites in Big Slough (Myakkahatchee River), and one site each in Howard Creek, Clay Gully, Blackburn Canal, Deer Prairie Slough, and Little Salt Creek. Sampling is conducted once a month on weekdays (Monday through Friday). Timing of the sample events is not coordinated with tidal stage or weather conditions. To characterize the water quality entering and leaving the park, 5 stations were selected and described in the figure and table below (Figure 1 and Table 1).

Two of the sample stations are located within the Myakka River State Park boundaries (MY-B and CLG). In order to gain access to the park to collect samples, it was necessary to obtain Florida Department of Environmental Protection, Division of Recreation and Parks, Research/Collecting Permit Number: 4-08-2; Issue Date: December 6, 2007; Expiration Date December 31, 2008 for the first year, with annual report to the FDEP that includes the following: 1) Purpose of the project; 2) Project objective(s); 3) Sample parameters and methodology; and 4) Sample data regarding the quality of the water entering the park over the length of the collection period. The purpose of this report is to fulfill all the requirements of the permit to obtain a new permit for 2018.

Figure 1. Selected Sarasota County Sample Sites within the Myakka River SP context region

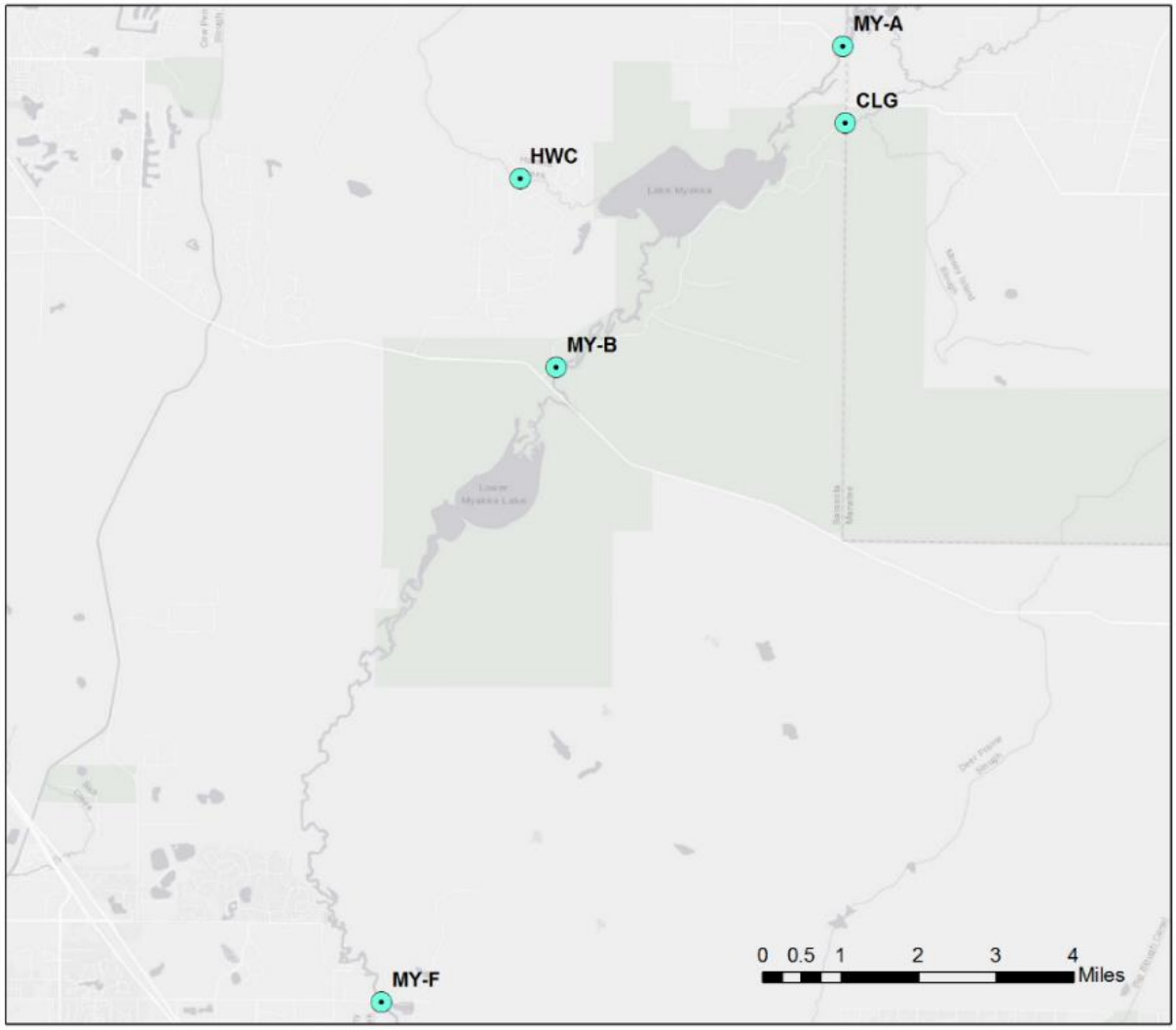

Table 1. Selected Sample Sites within the Myakka River SP context region

Station	Name	Location	Latitude	Longitude
HWC	Howard Creek	Bridge @ Rocking Horse Lane, Myakka Valley Trails, Sarasota	27.2765	-82.3214
MY-A	Myakka River	Bridge @ Myakka Rd. North of State Park, Myakka City	27.3014	-82.2539
MY-B *	Myakka River	Upstream of Bridge at State Road 72 in park, Sarasota	27.2413	-82.3138
MY-F	Myakka River	Bridge @ Border Road, Venice	27.1225	-82.3500
CLG *	Clay Gully	Bridge in Myakka River State Park; Sarasota	27.2871	-82.2533

*Within the Myakka State Park boundaries

Sampling

Sample collection, and field measurements with calibrated meters are conducted in accordance with Chapter 62-160 F.A.C. and the Department of Environmental Protection Standard Operating Procedures for Laboratory Operations and Sample Collection Activities. Discrete samples are collected monthly at all stations for the following parameters: Total Kjeldahl Nitrogen (TKN), Nitrite + Nitrate (NOX), Total Nitrogen (TN), Ammonia Nitrogen (NH_4), Orthophosphate (PO_4), Total Phosphate (TP), Chlorophyll a, Turbidity, Total Suspended Solids (TSS), Biochemical Oxygen Demand (BOD), and Color. Iron (Fe) is collected monthly from three (3) stations in WBID 1981A to address the Iron TMDL: 1) MYA – the Myakka River at Myakka Road; 2) CLG – Clay Gully within the park; and 3) MYA-B – the Myakka River just north of State Road 72 within the park. A fourth station in Howard Creek (HWC) was added in February 2009 to determine if flow from Howard Creek was contributing iron loading to the watershed. All samples are grab samples taken from shore above any control structure and are stored on ice and transported to the Sarasota County Natural Resources Quality Assurance Office for delivery to the contract laboratories for analysis.

Reporting

Field measurements and observations are recorded on the standardized Water Resources field data sheets for each site and consist of the following: Date and time of sampling; Station ID; Persons sampling; GPS locations (decimal degrees); water temperature (˚C); dissolved oxygen saturation (%); dissolved oxygen (mg/L); specific conductance (µmhos/cm); salinity (ppt); meter depth (ft); water depth (ft); tidal stage; flow rate and direction; and secchi depth (m). Weather condition data consists of daily and antecedent rainfall (in.), cloud cover (%), air temperature (˚C), and wind direction (degree) and speed (mph). Sample data is stored in Sarasota County's Water Quality Planning database (WQPdb).

Physical characteristics such as stream width (yds.), shoreline description, water color, clarity, and odor, stream bottom description, sediment description, eroded areas, and evidence of recent herbicide application (dead vegetation) are also recorded. The field data also includes biological observations as they apply to water quality and flow such as aquatic and shoreline vegetation, bird colonies, red ride, algae blooms, and fish, invertebrate, and wildlife species.

Upstream, sample site, and downstream photos were taken at the beginning of the project to identify station location and background characteristics. Additional photos are taken during each sampling event to record any unusual or out of the ordinary conditions.

Data

Data from May 2008 through May 2018 for the for the five stations of interest to the State Park are included in this report. The following graphs depict the results of sampling and modeled trends of each station for nutrients, chlorophyll-a, fecal coliform and iron. Recall that MY-A characterizes flow entering the park from the north, CLG is from the east, HWC is from the west, MY-B is in the middle of the park and MY-F is downstream of the park.

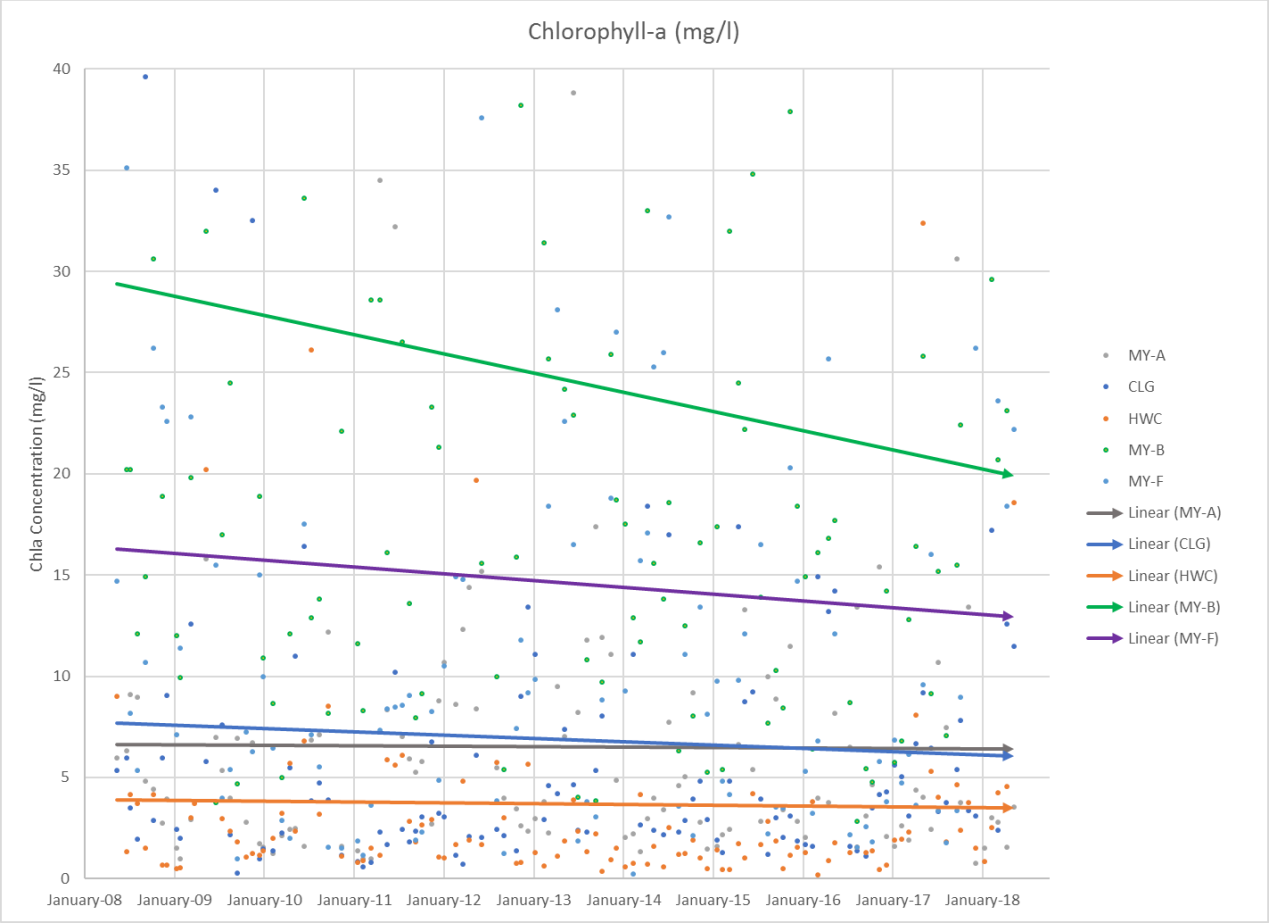

Figure 2. Reported Chlorophyll-a concentrations for Myakka State Park water quality stations with modeled linear trends, May 2008- May 2018.

The figure above shows that chlorophyll-a (chla) concentrations are higher at downstream river stations MY-B (within the park) and MY-F (downstream of the park) than river stations entering the park (upstream) from the north (MY-A), from the Clay Gulley to the east (CLG), or Howard Creek to the west (HWC). The modeled linear trends in the figure show chla concentrations to be decreasing in the downstream stations while the upstream stations remain steady. These data suggest that over the past 10-years, aquatic ecological process in the park are producing less suspended algae downstream of the Myakka River.

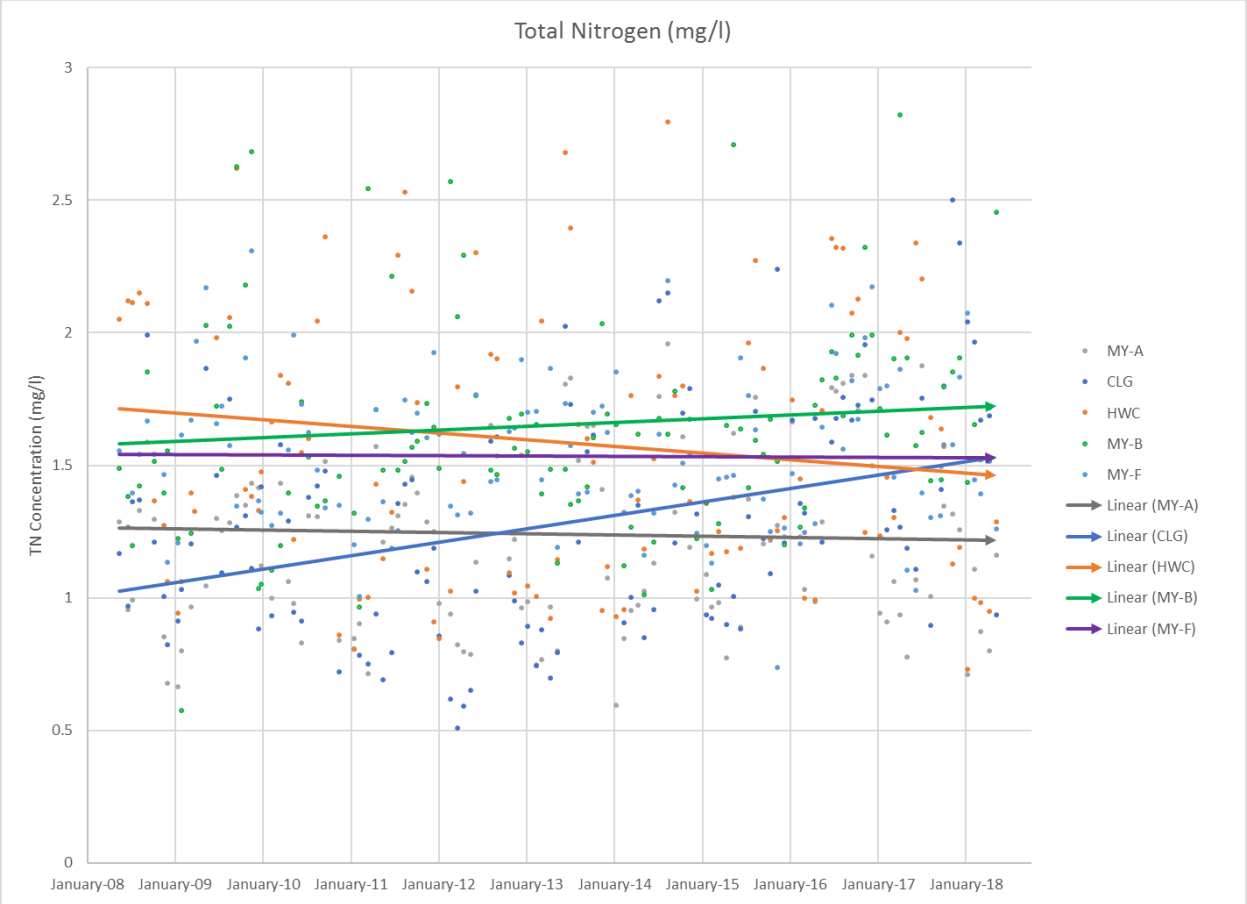

Figure 3. Reported Total Nitrogen (Total Kjedahl Nitrogen + Nitrate/Nitrite) concentrations for Myakka State Park water quality stations with modeled linear trends, May 2008- May 2018.

The figure above shows that total nitrogen (TN) concentrations are closely grouped at all Myakka State Park context stations. Upstream stations (MY-A, CLG) show less TN concentrations than downstream stations (MY-B and MY-F). A weak 10-year modeled linear trends show TN concentrations to be slightly decreasing from HWC in the west, while steadily increasing from the east in Clay Gulley. These data suggest that over the past 10-years the amount of TN leaving the park has not changed, while the TN load entering the park has increased steadily.

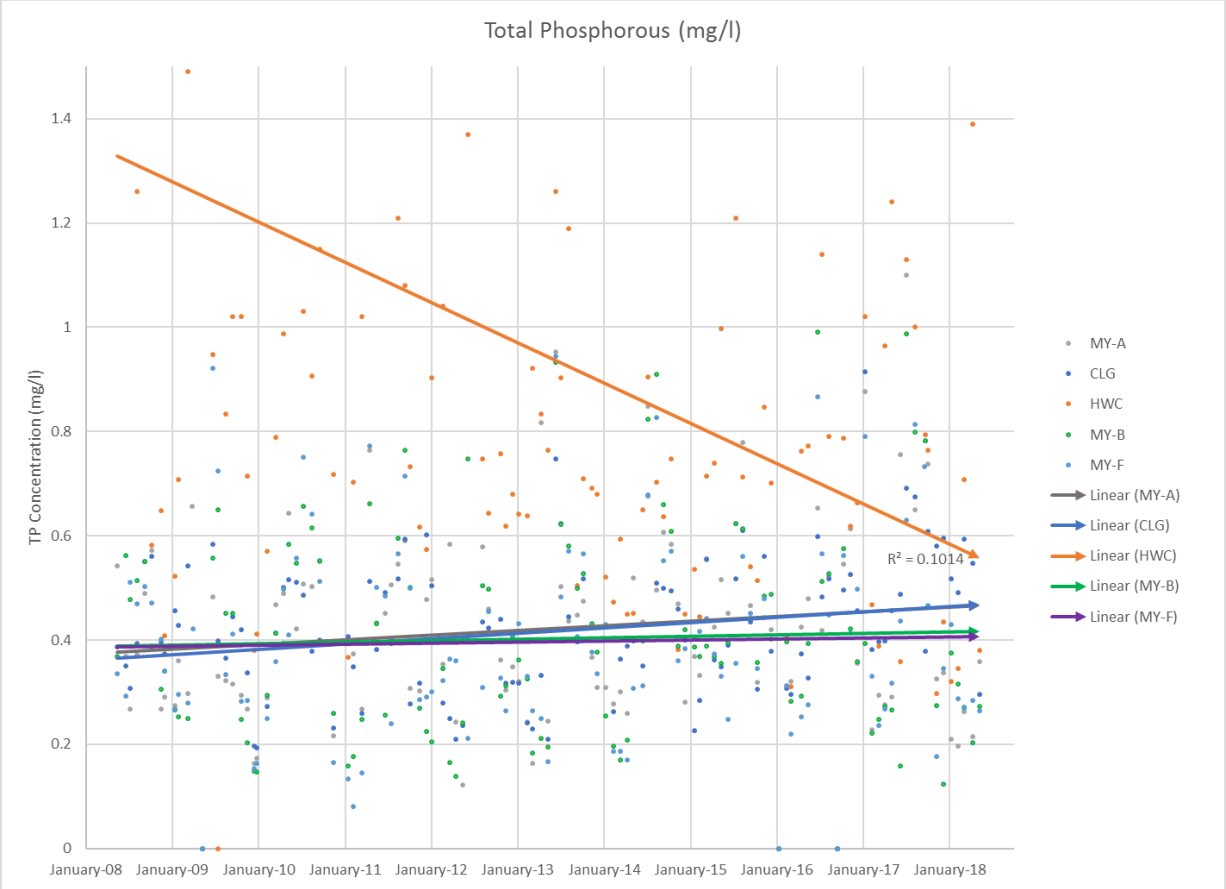

Figure 4. Reported Total Phosphorus concentrations for Myakka State Park water quality stations with modeled linear trends, May 2008- May 2018.

The figure above shows that total phosphorous (TP) concentrations are closely grouped at all Myakka State Park context stations. The exception is Howard Creek (HWC) which is very elevated and appears to be decreasing with a weak trend. The other modeled linear trends have a good fit and show a slight increase, particularly from Clay Gulley (CLG). These data show that TP concentrations do not change significantly through the park, and have not changed significantly over the past 10 year. Though loads from Clay Gulley are likely increasing, and Howard Creek could be decreasing.

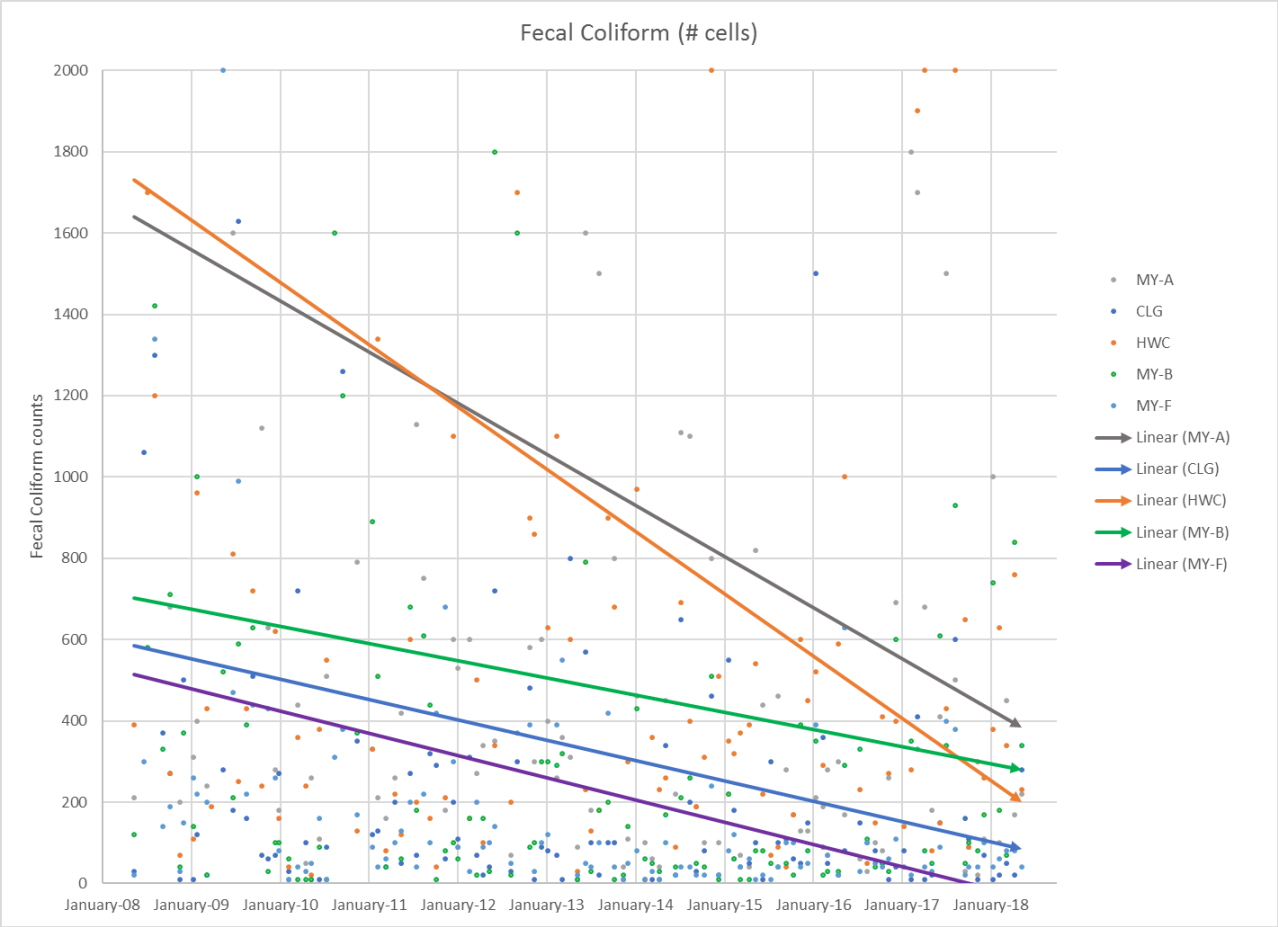

Figure 5. Reported Fecal coliform count concentrations for Myakka State Park water quality stations with modeled linear trends, May 2008- May 2018.

The sampling results in this figure show that counts of fecal coliform are decreasing at water quality stations in the state park over the past 10 years. The upstream stations MY-A and HWC tend to have higher counts than the downstream station MY-F. There is high temporal and spatial variation in these data, thus suggested trends in fecal coliform are weak.

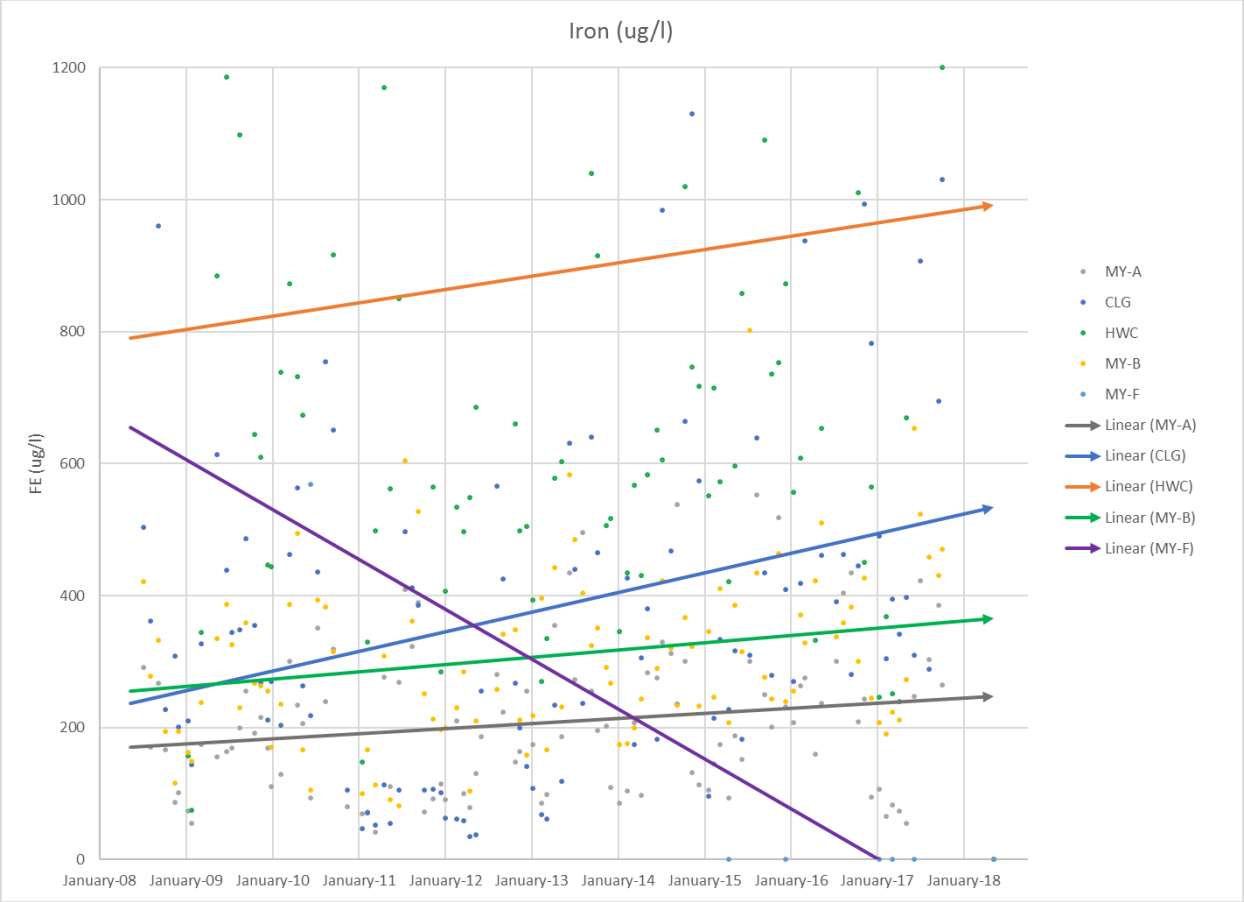

Figure 6. Reported Iron concentrations for Myakka State Park water quality stations with modeled linear trends, May 2008- May 2018.

The sampling results in this figure show that iron (FE) concentrations are slightly increasing at water quality stations in the state park over the past 10 years, except for the furthest downstream station MY-F. These data suggest that iron concentrations are higher (and increasing) entering the park from Clay Gulley, and particularly Howard Creek. It is important to note that the baseflow of these stations is much lower, and could result in higher concentrations of suspended iron.

Recommendations

All data presented in this report is available for download and further analyses via Sarasota County's Water Atlas at http://www.sarasota.wateratlas.usf.edu/ . Trends and patterns in the data described in this report are intended to serve only as suggestions, and are not in any way conclusions based on rigorous or peer-reviewed analyses. We welcome continued collaboration between the staff of Myakka River State Park and Sarasota County Environmental Stormwater. The river is valuable to both organizations and we should continue to work together to monitor, steward and preserve this important resource.

APPENDIX A

WATER QUALITY DATA

May 2018 – May 2008

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
CLG	5/16/18	11.5	0.937	0.296	280	0
CLG	4/16/18	12.6	1.686	0.547	20	
CLG	3/12/18	2.41	1.671	0.593	50	
CLG	2/13/18	17.2	1.964	0.491	20	
CLG	1/16/18	50.9	2.042	0.518	10	
CLG	12/12/17	3.11	2.339	0.595	70	
CLG	11/14/17	3.38	2.502	0.581	10	
CLG	10/10/17	7.8	1.801	0.609	110	1030
CLG	9/26/17	5.39	1.41	0.379	160	695
CLG	8/15/17	3.78	0.895	0.674	600	289
CLG	7/11/17	3.34	1.752	0.691	3000	907
CLG	6/13/17	6.47	1.107	0.488	150	310
CLG	5/10/17	9.17	1.186	0.456	20	397
CLG	4/11/17	6.68	1.266	0.398	10	342
CLG	3/14/17	3.1	1.331	0.397	410	395
CLG	2/14/17	5.04	1.258	0.381	10	305
CLG	1/17/17	5.6	1.226	0.914	80	490
CLG	12/13/16	4.31	1.747	0.457	40	782
CLG	11/15/16	4.14	1.956	0.525	10	993
CLG	10/18/16	3.5	1.727	0.496	50	445
CLG	9/21/16	1.1	1.669	0	80	281
CLG	8/17/16	1.4	1.757	0.517	100	462
CLG	7/19/16	1.62	1.678	0.482	150	391
CLG	6/28/16		1.588	0.598		
CLG	5/19/16	14.2	1.212	0.328	80	461
CLG	4/21/16	13.2	1.678	0.373	20	1240
CLG	3/10/16	14.9	1.319	0.295	50	938
CLG	2/18/16	1.62	1.357	0.307	360	419
CLG	1/19/16	1.71	1.669	0	1500	270
CLG	12/17/15	1.85	1.207	0.378	150	409
CLG	11/18/15	3.08	2.24	0.56	50	1870
CLG	10/20/15	2.02	1.091	0.306	60	279
CLG	9/22/15	3	1.225	0.435	110	434
CLG	8/19/15	1.2	1.702	0.61	100	639
CLG	7/21/15	3.94	1.308	0.518	300	310

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
CLG	6/18/15	9.21	0.882	0.39	10	182
CLG	5/19/15	8.76	1.004	0.348	100	317
CLG	4/21/15	17.4	0.9	0.362	50	228
CLG	3/18/15	4.83	1.047	0.555	40	334
CLG	2/18/15	1.31	0.924	0.284	180	214
CLG	1/27/15	1.93	0.935	0.227	550	95.7
CLG	12/18/14	2.92	1.316	0.4	20	574
CLG	11/18/14	4.83	1.788	0.46	460	1130
CLG	10/20/14	3.95	1.698	0.494	80	664
CLG	9/16/14	2.89	1.207	0.499	30	235
CLG	8/21/14	2.31	2.15	0.509	200	468
CLG	7/14/14	17	2.121	0.678	650	984
CLG	6/23/14	2.17	0.955	0.351	20	183
CLG	5/15/14	2.38	0.85	0.398	340	380
CLG	4/17/14	18.4	1.348	0.389	10	306
CLG	3/19/14	2.67	1.003	0.363	10	175
CLG	2/19/14	11.1	0.906	0.263	10	426
CLG	10/15/13	8.04	1.613	0.518	100	465
CLG	9/18/13	5.33	1.552	0.396	100	640
CLG	8/15/13	2.31	1.212	0.444	20	237
CLG	7/10/13	2.39	1.729	0.624	100	440
CLG	6/20/13	4.64	2.023	0.748	570	631
CLG	5/17/13	7.37	0.794	0.21	10	119
CLG	4/18/13	4.22	0.699	0.332	800	234
CLG	3/13/13	4.59	0.881	0.229	10	61.8
CLG	2/21/13	2.91	0.745	0.241	70	67.9
CLG	1/15/13	11.1	0.892	0.317	80	108
CLG	12/19/12	13.4	0.831	0.319	90	141
CLG	11/20/12	9	0.99	0.317	10	199
CLG	10/31/12	1.38	1.085	0.439	480	267
CLG	9/10/12	2.14	1.609	0.423	300	425
CLG	8/15/12	2.44	1.59	0.434	30	566
CLG	6/12/12	2.06	1.024	0.408	720	256
CLG	5/21/12	6.08	0.651	0.236	40	37.6
CLG	4/24/12	2.1	0.593	0.209	20	34.5
CLG	3/27/12	0.73	0.51	0.25	70	59.6
CLG	2/28/12	1.15	0.618	0.279	310	61
CLG	1/11/12	3.07	0.855	0.504	110	62.5
CLG	12/22/11	3.25	1.186	0.602	200	101
CLG	11/21/11	6.77	1.063	0.318	60	107

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
CLG	10/13/11	3.05	1.097	0.278	290	106
CLG	9/20/11	2.33	1.447	0.593	320	385
CLG	8/23/11	1.81	1.43	0.518	2200	412
CLG	7/26/11	2.42	1.356	0.401	70	497
CLG	6/28/11	10.2	0.795	0.491	270	106
CLG	5/24/11	1.71	0.69	0.382	50	55.6
CLG	4/26/11	2.3	0.938	0.512	200	113
CLG	3/22/11	0.8	0.751	0.26	40	52.6
CLG	2/15/11	0.59	0.783	0.349	130	71.2
CLG	1/25/11	0.83	0.806	0.406	120	46.6
CLG	11/23/10	1.17	0.72	0.232	350	105
CLG	9/27/10	3.91	1.479	0.4	1260	651
CLG	8/23/10	4.73	1.423	0.378	4300	754
CLG	7/20/10	3.84	1.378	0.486	90	436
CLG	6/21/10	16.4	0.911	0.511	10	218
CLG	5/18/10	11	0.947	0.516	10	263
CLG	4/27/10	5.48	1.289	0.501	100	563
CLG	3/23/10	2.26	1.578	0.414	720	462
CLG	2/17/10	1.39	0.931	0.273	30	204
CLG	1/5/10	1.48	1.42	0.194	270	270
CLG	12/22/09	1	0.884	0.197	70	212
CLG	11/24/09	32.5	1.11	0.337	60	269
CLG	10/29/09	68.5	1.309	0.42	70	355
CLG	9/22/09	0.28	1.268	0.445	510	486
CLG	8/25/09	2.17	1.751	0.365	160	348
CLG	7/23/09	7.6	1.093	0.398	1630	344
CLG	6/30/09	34	1.463	0.583	180	439
CLG	5/20/09	5.79	1.867	0	280	614
CLG	3/18/09	12.6	1.203	0.542	20	327
CLG	2/5/09	2.01	1.033	0.428	120	144
CLG	1/21/09	2.44	0.912	0.456	10	210
CLG	12/11/08	9.07	0.822	0.374	500	201
CLG	11/24/08	5.96	1.004	0.397	10	308
CLG	10/16/08	2.89	1.211	0.561	270	227
CLG	9/16/08	39.6	1.993	0.551	370	960
CLG	8/14/08	1.97	1.37	0.393	1300	361
CLG	7/17/08	3.48	1.363	0.307	4900	503
CLG	6/30/08	5.96	0.97	0.351	1060	
CLG	5/22/08	5.34	1.168	0.387	30	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
HWC	5/16/18	18.6	1.286	0.38	230	0
HWC	4/16/18	4.57	0.948	1.39	760	
HWC	3/12/18	4.26	0.983	0.708	340	
HWC	2/13/18	2.54	1	0.345	630	
HWC	1/16/18	0.848	0.732	0.321	380	
HWC	12/12/17	1.49	1.191	0.434	260	
HWC	11/14/17	3.76	1.127	0.298	300	
HWC	10/10/17	2.38	1.572	0.764	90	1200
HWC	9/26/17	4.65	1.636	0.794	650	1720
HWC	8/15/17	1.81	1.681	1	2000	1830
HWC	7/11/17	4.03	2.202	1.13	430	2630
HWC	6/13/17	5.32	2.338	0.359	150	1640
HWC	5/10/17	32.4	1.978	1.24	80	669
HWC	4/11/17	8.09	2	0.965	2000	239
HWC	3/14/17	2.31	1.304	0.388	1900	252
HWC	2/14/17	1.94	1.454	0.468	280	368
HWC	1/17/17	1.91	1.234	1.02	140	246
HWC	12/13/16	0.684	1.499	0.663	400	564
HWC	11/15/16	0.45	1.248	0.619	270	451
HWC	10/18/16	1.4	2.127	0.787	410	1010
HWC	9/21/16	1.29	2.075	0	150	1400
HWC	8/17/16	1.54	2.318	0.791	50	1460
HWC	7/19/16	1.29	2.321	1.14	230	1400
HWC	6/28/16		2.355	1.61		
HWC	5/19/16	1.78	1.706	0.772	1000	653
HWC	4/21/16	0.913	0.992	0.762	590	332
HWC	3/10/16	0.192	0.997	0.31	70	3300
HWC	2/18/16	3.81	1.449	0.403	290	608
HWC	1/19/16	1.3	1.747	0	520	557
HWC	12/17/15	1.54	1.303	0.702	450	872
HWC	11/18/15	1.14	1.252	0.847	600	753
HWC	10/20/15	0.509	1.224	0.515	170	736
HWC	9/22/15	1.87	1.865	0.54	40	1090
HWC	8/19/15	2.85	2.274	0.712	90	1400
HWC	7/21/15	1.71	1.961	1.21	70	1630
HWC	6/18/15	4.2	1.188	1.85	220	858
HWC	5/19/15	1.01	1.38	0.998	540	597
HWC	4/21/15	1.72	1.175	0.74	390	421
HWC	3/18/15	0.45	1.249	0.715	370	572
HWC	2/18/15	0.46	1.167	0.444	320	715

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
HWC	1/27/15	1.44	1.357	0.536	350	551
HWC	12/18/14	0.51	1.025	0.45	510	717
HWC	11/18/14	1.03	1.363	0.382	2000	747
HWC	10/20/14	1.89	1.799	0.748	310	1020
HWC	9/16/14	1.26	1.762	0.637	190	1620
HWC	8/21/14	1.19	2.795	0.703	400	2110
HWC	7/14/14	2.51	1.836	0.905	690	606
HWC	6/23/14	0.57	1.524	0.65	90	651
HWC	5/15/14	1.61	1.183	0.451	260	583
HWC	4/17/14	0.71	1.369	0.45	230	431
HWC	3/19/14	4.16	1.763	0.593	360	567
HWC	2/19/14	0.75	0.955	0.473	10	435
HWC	1/16/14	0.58	0.928	0.52	970	345
HWC	12/11/13	1.53	1.119	0.68	300	517
HWC	11/20/13	0.93	0.953	0.691	10	506
HWC	10/15/13	0.35	1.512	0.71	680	915
HWC	9/18/13	2.23	1.6	0.504	900	1040
HWC	8/15/13	1.32	1.653	1.19	180	1330
HWC	7/10/13	2.33	2.396	0.903	130	1668
HWC	6/20/13	3.88	2.68	1.26	230	1760
HWC	5/17/13	1.87	1.144	0.764	30	603
HWC	4/18/13	1.12	0.923	0.834	600	578
HWC	3/13/13	56.3	2.046	0.921	5400	335
HWC	2/21/13	0.64	1.005	0.639	1100	270
HWC	1/15/13	1.27	1.045	0.641	630	393
HWC	12/19/12	5.64	1.539	0.679	2100	505
HWC	11/20/12	0.79	1.018	0.618	860	498
HWC	10/31/12	0.78	1.095	0.758	900	660
HWC	9/10/12	2.99	1.903	0.643	1700	1620
HWC	8/15/12	5.74	1.919	0.748	200	1490
HWC	6/12/12	1.68	2.304	1.37	340	1840
HWC	5/21/12	19.7	3.138	4.46	2700	686
HWC	4/24/12	1.92	1.438	1.57	100	549
HWC	3/27/12	4.83	1.795	1.54	500	497
HWC	2/28/12	1.7	1.026	1.04	160	534
HWC	1/11/12	1.02	0.845	0.903	90	407
HWC	12/22/11	1.09	0.91	0.574	1100	284
HWC	11/21/11	2.92	1.107	0.616	210	564
HWC	10/13/11	2.64	1.738	0.732	40	1390
HWC	9/20/11	1.8	2.158	1.08	160	1780

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
HWC	8/23/11	2.82	2.532	1.21	8400	1700
HWC	7/26/11	6.09	2.292	1.54	200	1814
HWC	6/28/11	5.6	1.324	3.47	600	850
HWC	5/24/11	5.88	1.148	2.45	120	562
HWC	4/26/11	1.17	1.43	1.65	220	1170
HWC	3/22/11	1.49	1.001	1.02	80	498
HWC	2/15/11	0.9	0.994	0.703	1340	330
HWC	1/25/11	0.8	0.807	0.367	330	148
HWC	11/23/10	1.12	0.86	0.717	130	
HWC	9/27/10	8.54	2.363	1.15	7600	917
HWC	8/23/10	3.19	2.046	0.907	21000	1460
HWC	7/20/10	26.1	1.601	1.03	550	2060
HWC	6/21/10	6.8	1.548	3.36	380	
HWC	5/18/10	2.34	1.219	1.59	20	673
HWC	4/27/10	5.72	1.81	0.988	240	732
HWC	3/23/10	3.24	1.839	0.789	360	873
HWC	2/17/10	1.99	1.665	0.571	40	738
HWC	1/5/10	1.4	1.476	0.411	160	444
HWC	12/22/09	1.16	1.331	0.38	620	447
HWC	11/24/09	1.24	1.381	0.715	2100	610
HWC	10/29/09	1.07	1.409	1.02	240	644
HWC	9/22/09	1.81	2.621	1.02	720	1665
HWC	8/25/09	2.33	2.058	0.834	430	1098
HWC	7/23/09	2.96	3.133	0	250	1721
HWC	6/30/09	3.79	1.98	0.948	810	1186
HWC	5/20/09	20.2	3.127	0	4200	885
HWC	4/3/09	3.7	1.326	2.13	190	
HWC	3/18/09	3.02	1.396	1.49	430	344
HWC	2/5/09	0.55	1.063	0.707	960	75.4
HWC	1/21/09	0.48	0.941	0.522	110	157
HWC	12/11/08	0.66	1.063	0.408	5800	
HWC	11/24/08	0.67	1.273	0.648	70	
HWC	10/16/08	4.14	1.367	0.582	270	
HWC	9/16/08	1.5	2.11	1.63	2100	
HWC	8/14/08	3.72	2.15	1.26	1200	
HWC	7/17/08	4.14	2.114	3.3	1700	
HWC	6/30/08	1.33	2.119	3.23	2700	
HWC	5/22/08	9.03	2.052	2.29	390	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-A	5/16/18	3.55	1.16	0.359	220	0
MY-A	4/16/18	1.55	0.801	0.214	170	
MY-A	3/12/18	2.8	0.874	0.262	450	
MY-A	2/13/18	3.03	1.109	0.197	100	
MY-A	1/16/18	1.5	0.711	0.21	1000	
MY-A	12/12/17	0.745	1.256	0.337	110	
MY-A	11/14/17	13.4	1.317	0.326	20	
MY-A	10/10/17	3.75	1.345	0.738	90	265
MY-A	9/26/17	30.6	1.495	0.783	30	385
MY-A	8/15/17	7.46	1.005	0.65	500	303
MY-A	7/11/17	10.7	1.875	1.1	1500	423
MY-A	6/13/17	2.44	1.068	0.755	410	247
MY-A	5/10/17	4.02	0.777	0.291	180	55.1
MY-A	4/11/17	4.36	0.935	0.276	680	73.1
MY-A	3/14/17	1.92	1.062	0.294	1700	82.5
MY-A	2/14/17	2.6	0.908	0.228	1800	65.2
MY-A	1/17/17	1.59	0.942	0.877	7900	107
MY-A	12/13/16	2.1	1.159	0.355	690	95.1
MY-A	11/15/16	15.4	1.838	0.614	260	243
MY-A	10/18/16	4.63	1.707	0.545	80	209
MY-A	9/21/16	3.11	1.839	0	100	435
MY-A	8/17/16	13.4	1.809	0.523	30	404
MY-A	7/19/16	6.5	1.781	0.418	60	300
MY-A	6/28/16		1.792	0.654		
MY-A	5/19/16	8.17	1.288	0.48	170	237
MY-A	4/21/16	3.75	0.985	0.425	300	160
MY-A	3/10/16	3.99	1.031	0.32	280	275
MY-A	2/18/16		1.23	0.312	190	263
MY-A	1/19/16	2.02	1.665	0	210	207
MY-A	12/17/15	2.83	1.23	0.42	130	231
MY-A	11/18/15	11.5	1.273	0.443	130	518
MY-A	10/20/15	3.4	1.216	0.319	170	201
MY-A	9/22/15	8.87	1.205	0.466	280	250
MY-A	8/19/15	9.98	1.757	0.779	460	553
MY-A	7/21/15	2.84	1.374	0.623	2600	301
MY-A	6/18/15	5.4	0.891	0.452	440	152
MY-A	5/19/15	13.3	1.621	0.516	820	188
MY-A	4/21/15	6.62	0.775	0.425	40	93.1
MY-A	3/18/15	2.44	0.981	0.554	70	175
MY-A	2/18/15	2.17	0.967	0.333	60	145

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-A	1/27/15	1.6	1.088	0.368	220	106
MY-A	12/18/14	1.47	0.994	0.281	100	114
MY-A	11/18/14	2.81	1.189	0.47	800	132
MY-A	10/20/14	9.19	1.609	0.584	100	300
MY-A	9/16/14	5.04	1.324	0.607	190	538
MY-A	8/21/14	4.62	1.957	0.496	1100	312
MY-A	7/14/14	7.75	1.76	0.848	1110	330
MY-A	6/23/14	3.42	1.13	0.434	220	275
MY-A	5/15/14	4	1.026	0.519	450	283
MY-A	4/17/14	2.96	0.973	0.259	40	96.9
MY-A	3/19/14	1.32	0.952	0.301	60	208
MY-A	2/19/14	2.21	0.846	0.277	100	104
MY-A	1/16/14	2.05	0.595	0.309	460	85.7
MY-A	12/11/13	4.88	1.074	0.309	110	110
MY-A	11/20/13	11.1	1.41	0.367	40	202
MY-A	10/15/13	11.9	1.651	0.475	800	196
MY-A	9/18/13	17.4	1.646	0.448	4800	256
MY-A	8/15/13	11.8	1.519	0.437	1500	496
MY-A	7/10/13	8.23	1.828	0.503	180	272
MY-A	6/20/13	38.8	1.806	0.952	1600	434
MY-A	5/17/13	7.01	0.799	0.244	90	187
MY-A	4/18/13	9.51	0.965	0.817	310	355
MY-A	3/13/13	2.27	0.766	0.164	360	98.2
MY-A	2/21/13	3.8	0.748	0.242	260	85.6
MY-A	1/15/13	2.96	0.986	0.321	400	175
MY-A	12/19/12	2.37	0.961	0.348	600	256
MY-A	11/20/12	2.6	1.22	0.304	300	164
MY-A	10/31/12	3.47	1.148	0.362	580	148
MY-A	9/10/12	4	1.535	0.459	3400	223
MY-A	8/15/12	5.48	1.649	0.579	70	280
MY-A	6/12/12	15.2	1.135	0.401	350	186
MY-A	5/21/12	8.38	0.786	0.122	7600	130
MY-A	4/24/12	14.4	0.798	0.242	340	78.4
MY-A	3/27/12	12.3	0.824	0.583	270	99.7
MY-A	2/28/12	8.62	0.94	0.354	600	210
MY-A	1/11/12	10.7	0.98	0.516	530	91.1
MY-A	12/22/11	8.79	1.249	0.478	600	115
MY-A	11/21/11	2.69	1.287	0.302	180	92.4
MY-A	10/13/11	5.78	1.396	0.307	4500	72.8
MY-A	9/20/11	5.27	1.454	0.59	6900	389

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-A	8/23/11	5.93	1.353	0.546	750	323
MY-A	7/26/11	7.02	1.309	0.506	1130	409
MY-A	6/28/11	32.2	1.262	0.451	7500	269
MY-A	5/24/11	8.35	1.209	0.433	420	111
MY-A	4/26/11	34.5	1.57	0.764	260	276
MY-A	3/22/11	0.98	0.713	0.268	160	41.2
MY-A	2/15/11	0.98	0.901	0.373	210	72
MY-A	1/25/11	1.37	0.846	0.395	330	69.3
MY-A	11/23/10	1.62	0.839	0.217	790	80.4
MY-A	9/27/10	12.2	1.514	0.55	2400	319
MY-A	8/23/10	7.13	1.306	0.503	2900	240
MY-A	7/20/10	6.87	1.309	0.507	510	351
MY-A	6/21/10	1.6	0.83	0.421	110	93.3
MY-A	5/18/10	2.49	0.979	0.643	260	206
MY-A	4/27/10	2.45	1.06	0.49	50	234
MY-A	3/23/10	2.15	1.432	0.468	440	301
MY-A	2/17/10	1.25	0.999	0.289	10	129
MY-A	1/5/10	1.56	1.12	0.173	180	111
MY-A	12/22/09	1.75	1.414	0.164	280	169
MY-A	11/24/09	6.71	1.432	0.268	630	216
MY-A	10/29/09	2.79	1.351	0.294	1120	192
MY-A	9/22/09	6.93	1.385	0.316	2700	256
MY-A	8/25/09	3.96	1.283	0.323	2300	200
MY-A	7/23/09	5.36	1.255	0.33	2200	169
MY-A	6/30/09	6.96	1.3	0.483	1600	164
MY-A	5/20/09	15.8	1.046	0	2500	156
MY-A	4/6/09		5.786	0.656		
MY-A	3/18/09	2.91	0.966	0.297	240	175
MY-A	2/5/09	0.97	0.799	0.361	400	55.2
MY-A	1/21/09	1.51	0.665	0.275	310	73.3
MY-A	12/11/08	3.95	0.676	0.29	2100	101
MY-A	11/24/08	2.76	0.854	0.267	200	86.3
MY-A	10/16/08	4.44	1.298	0.572	680	166
MY-A	9/16/08	4.82	1.588	0.489	2200	268
MY-A	8/14/08	8.97	1.328	0.372	4900	170
MY-A	7/17/08	9.11	0.992	0.268	4100	291
MY-A	6/30/08	6.31	0.957	0.369	2700	
MY-A	5/22/08	5.98	1.286	0.542	210	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-B	5/16/18	99	2.456	0.273	340	0
MY-B	4/16/18	23.1	1.718	0.203	840	
MY-B	3/12/18	20.7	1.521	0.271	70	
MY-B	2/13/18	29.6	1.654	0.315	180	
MY-B	1/16/18	52	1.436	0.375	740	
MY-B	12/12/17	50.5	1.904	0.123	170	
MY-B	11/14/17	73.3	1.854	0.275	80	
MY-B	10/10/17	22.4	1.796	0.464	100	470
MY-B	9/26/17	15.5	1.445	0.783	50	430
MY-B	8/15/17	7.05	1.442	0.799	930	458
MY-B	7/11/17	15.2	1.624	0.988	340	524
MY-B	6/13/17	9.13	1.575	0.159	610	653
MY-B	5/10/17	25.8	1.905	0.266	50	272
MY-B	4/11/17	16.4	2.821	0.273	80	212
MY-B	3/14/17	12.8	1.903	0.247	4800	224
MY-B	2/14/17	6.8	1.614	0.221	350	190
MY-B	1/17/17	5.73	1.713	0.394	2100	208
MY-B	12/13/16	14.2	1.992	0.358	600	245
MY-B	11/15/16	6.35	2.323	0.422	30	427
MY-B	10/18/16	4.79	1.914	0.575	50	300
MY-B	9/21/16	5.43	1.992	0	40	383
MY-B	8/17/16	2.84	1.688	0.527	110	359
MY-B	7/19/16	8.72	1.83	0.512	330	338
MY-B	6/28/16		1.93	0.99		
MY-B	5/19/16	17.7	1.824	0.393	290	510
MY-B	4/21/16	16.8	1.726	0.292	30	423
MY-B	3/10/16	16.1	1.34	0.283	30	328
MY-B	2/18/16	6.4	1.268	0.397	20	371
MY-B	1/19/16	14.9	1.528	0	350	256
MY-B	12/17/15	18.4	1.202	0.488	80	240
MY-B	11/18/15	37.9	1.515	0.484	390	464
MY-B	10/20/15	8.43	1.673	0.357	20	244
MY-B	9/22/15	10.3	1.543	0.442	50	276
MY-B	8/19/15	7.69	1.594	0.614	40	435
MY-B	7/21/15	13.9	1.414	0.623	50	802
MY-B	6/18/15	34.8	1.636	0.395	80	315
MY-B	5/19/15	22.2	2.71	0.355	80	385
MY-B	4/21/15	24.5	1.652	0.369	10	208
MY-B	3/18/15	32	1.279	0.388	10	411
MY-B	2/18/15	5.4	1.032	0.369	60	246

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-B	1/27/15	17.4	1.359	0.386	220	346
MY-B	12/18/14	5.28	1.223	0.42	10	233
MY-B	11/18/14	16.6	1.675	0.388	510	323
MY-B	10/20/14	8.03	1.417	0.609	40	367
MY-B	9/16/14	12.5	1.779	0.659	50	234
MY-B	8/21/14	6.31	1.619	0.909	260	320
MY-B	7/14/14	18.6	1.676	0.824	210	423
MY-B	6/23/14	13.8	1.209	0.398	40	290
MY-B	5/15/14	15.6	1.013	0.403	170	336
MY-B	4/17/14	33	1.618	0.208	30	244
MY-B	3/19/14	11.7	1.266	0.17	50	199
MY-B	2/19/14	12.9	1.122	0.197	60	176
MY-B	1/16/14	17.5	1.653	0.254	430	175
MY-B	12/11/13	18.7	1.694	0.377	140	268
MY-B	11/20/13	25.9	2.033	0.431	20	291
MY-B	10/15/13	9.73	1.603	0.528	10	351
MY-B	9/18/13	3.83	1.419	0.499	200	325
MY-B	8/15/13	10.8	1.366	0.58	180	404
MY-B	7/10/13	4.04	1.352	0.622	30	485
MY-B	6/20/13	22.9	1.485	0.933	790	583
MY-B	5/17/13	24.2	1.132	0.195	10	231
MY-B	4/18/13	52.8	1.486	0.211	7300	443
MY-B	3/13/13	25.7	1.392	0.183	320	166
MY-B	2/21/13	31.4	1.653	0.326	290	396
MY-B	1/15/13	40.2	1.552	0.362	300	218
MY-B	12/19/12	42	1.694	0.407	300	159
MY-B	11/20/12	38.2	1.566	0.313	100	211
MY-B	10/31/12	15.9	1.677	0.293	90	348
MY-B	9/10/12	5.41	1.466	0.498	1600	341
MY-B	8/15/12	10	1.481	0.504	20	258
MY-B	6/12/12	15.6	1.763	0.748	1800	1210
MY-B	5/21/12	98.7	3.368	0.241	30	210
MY-B	4/24/12	44.3	2.293	0.139	160	104
MY-B	3/27/12	54.2	2.06	0.165	20	284
MY-B	2/28/12	132	2.571	0.345	160	230
MY-B	1/11/12	50.3	1.49	0.204	60	199
MY-B	12/22/11	21.3	1.643	0.225	100	197
MY-B	11/21/11	23.3	1.732	0.269	80	213
MY-B	10/13/11	9.12	1.592	0.501	10	252
MY-B	9/20/11	7.93	1.568	0.764	440	528

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-B	8/23/11	13.6	1.515	0.596	610	361
MY-B	7/26/11	26.5	1.483	0.393	180	605
MY-B	6/28/11	58.3	2.214	0.256	680	81.9
MY-B	5/24/11	16.1	1.482	0.432	60	91.2
MY-B	4/26/11	28.6	1.711	0.661	2200	309
MY-B	3/22/11	28.6	2.544	0.248	40	113
MY-B	2/15/11	8.32	0.966	0.177	510	166
MY-B	1/25/11	11.6	1.319	0.159	890	100
MY-B	11/23/10	22.1	1.46	0.26	370	
MY-B	9/27/10	8.18	1.367	0.552	1200	315
MY-B	8/23/10	13.8	1.345	0.615	1600	383
MY-B	7/20/10	12.9	1.532	0.657	10	393
MY-B	6/21/10	33.6	1.74	0.548	90	106
MY-B	5/18/10	211	3.695	0.583	10	167
MY-B	4/27/10	12.1	1.396	0.393	10	494
MY-B	3/23/10	5	1.198	0.413	10	387
MY-B	2/17/10	8.66	1.105	0.294	60	236
MY-B	1/5/10	10.9	1.05	0.147	100	171
MY-B	12/22/09	18.9	1.035	0.148	100	256
MY-B	11/24/09	49.7	2.683	0.203	30	264
MY-B	10/29/09	54.2	2.18	0.248	4800	268
MY-B	9/22/09	4.67	2.627	0.451	630	359
MY-B	8/25/09	24.5	2.026	0.452	390	230
MY-B	7/23/09	17	1.484	0.65	590	326
MY-B	6/30/09	3.76	1.724	0.557	210	387
MY-B	5/20/09	32	2.028	0	520	335
MY-B	3/18/09	19.8	1.245	0.25	20	238
MY-B	2/5/09	9.95	0.575	0.253	1000	149
MY-B	1/21/09	12	1.224	0.266	140	162
MY-B	12/11/08	62.5	1.556	0.341	370	195
MY-B	11/24/08	18.9	1.397	0.305	40	116
MY-B	10/16/08	30.6	1.515	0.388	710	195
MY-B	9/16/08	14.9	1.851	0.55	330	333
MY-B	8/14/08	12.1	1.423	0.514	1420	278
MY-B	7/17/08	20.2	1.198	0.477	580	421
MY-B	6/30/08	20.2	1.382	0.562	4800	
MY-B	5/22/08	53.6	1.489	0.368	120	
MY-F	5/16/18	22.2	1.26	0.264	40	0
MY-F	4/16/18	18.4	1.515	0.284	80	
MY-F	3/12/18	23.6	1.393	0.27	80	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-F	2/13/18	41.8	1.444	0.287	60	
MY-F	1/16/18	40.3	2.075	0.429	40	
MY-F	12/12/17	26.2	1.834	0.345	100	
MY-F	11/14/17	51.6	1.579	0.176	40	
MY-F	10/10/17	8.98	1.578	0.467	40	
MY-F	9/26/17	3.37	1.309	0.733	20	
MY-F	8/15/17	1.79	1.304	0.814	380	
MY-F	7/11/17	3.38	1.395	0.63	400	
MY-F	6/13/17	16	1.028	0.436	90	0
MY-F	5/10/17	9.57	1.103	0.317	30	
MY-F	4/11/17	3.65	1.861	0.267	40	
MY-F	3/14/17	6.14	1.455	0.237	330	0
MY-F	2/14/17	4.74	1.801	0.331	20	
MY-F	1/17/17	6.86	1.791	0.791	40	0
MY-F	12/13/16	3.81	2.175	0.498	110	
MY-F	11/15/16	5.81	1.982	0.414	60	
MY-F	10/18/16	1.83	1.674	0.562	40	
MY-F	9/21/16	2.57	1.821	0	50	
MY-F	8/17/16	1.56	1.561	0.448	100	
MY-F	7/19/16	2.17	1.922	0.566	30	
MY-F	6/28/16		2.105	0.867		
MY-F	5/19/16	12.1	1.645	0.276	630	
MY-F	4/21/16	25.7	1.28	0.253	20	
MY-F	3/10/16	6.79	1.246	0.219	70	
MY-F	2/18/16	3.24	1.204	0.312	90	
MY-F	1/19/16	5.31	1.468	0	390	
MY-F	12/17/15	14.7	1.262	0.402	50	0
MY-F	11/18/15	20.3	0.737	0.48	40	
MY-F	10/20/15	3.5	1.25	0.346	100	
MY-F	9/22/15	3.55	1.372	0.452	100	
MY-F	8/19/15	2.22	1.633	0.56	40	
MY-F	7/21/15	16.5	1.763	0.356	10	
MY-F	6/18/15	81.2	1.907	0.248	20	
MY-F	5/19/15	12.1	1.463	0.33	10	
MY-F	4/21/15	9.81	1.456	0.374	60	0
MY-F	3/18/15	4.14	1.448	0.441	40	
MY-F	2/18/15	4.84	1.13	0.417	120	
MY-F	1/27/15	9.77	1.198	0.401	80	
MY-F	12/18/14	8.13	1.244	0.384	20	
MY-F	11/18/14	13.4	1.546	0.361	240	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-F	10/20/14	2.15	1.508	0.57	20	
MY-F	9/16/14	11.1	1.424	0.552	20	
MY-F	8/21/14	3.57	2.197	0.827	40	
MY-F	7/14/14	32.7	1.618	0.676	40	
MY-F	6/23/14	26	1.321	0.312	20	
MY-F	5/15/14	25.3	1.162	0.308	100	
MY-F	4/17/14	17.1	1.401	0.17	10	
MY-F	3/19/14	15.7	1.387	0.186	30	
MY-F	2/19/14	0.25	1.324	0.187	10	
MY-F	1/16/14	9.29	1.854	0.429	80	
MY-F	12/11/13	27	1.623	0.336	50	
MY-F	11/20/13	18.8	1.725	0.377	10	
MY-F	10/15/13	8.82	1.699	0.566	40	
MY-F	9/18/13	3.04	1.399	0.406	420	
MY-F	8/15/13	3.81	1.391	0.57	100	
MY-F	7/10/13	1.87	1.575	0.482	40	
MY-F	6/20/13	16.5	1.734	0.944	50	
MY-F	5/17/13	22.6	1.192	0.167	20	
MY-F	4/18/13	28.1	1.865	0.25	2200	
MY-F	3/13/13	18.4	1.445	0.265	550	
MY-F	2/21/13	40.5	1.702	0.33	390	
MY-F	1/15/13	9.85	1.7	0.432	120	
MY-F	12/19/12	9.17	1.898	0.404	100	
MY-F	11/20/12	11.8	1.642	0.265	30	
MY-F	10/31/12	7.43	1.629	0.328	390	
MY-F	9/10/12	1.25	1.446	0.455	370	
MY-F	8/15/12	3.84	1.44	0.309	50	
MY-F	6/12/12	37.6	1.766	0.212	140	
MY-F	5/21/12	40.2	1.32	0.403	100	
MY-F	4/24/12	55.1	1.545	0.36	90	
MY-F	3/27/12	14.8	1.312	0.364	200	
MY-F	2/28/12	14.9	1.345	0.323	30	
MY-F	1/11/12	10.5	1.616	0.3	90	
MY-F	12/22/11	4.86	1.926	0.29	300	
MY-F	11/21/11	8.25	1.605	0.286	680	
MY-F	10/13/11	2.32	1.697	0.5	420	
MY-F	9/20/11	1.9	1.625	0.715	100	
MY-F	8/23/11	9.05	1.745	0.566	220	
MY-F	7/26/11	8.58	1.255	0.24	40	
MY-F	6/28/11	8.48	1.187	0.484	200	

Station	Date Collected	Chl a (mg/m3)	TN (mg/l)	TP (mg/l)	F Coli (#/100 ml)	Fe (ug/l)
MY-F	5/24/11	8.38	1.363	0.501	130	
MY-F	4/26/11	7.32	1.709	0.773	100	
MY-F	3/22/11	3.61	1.295	0.145	60	
MY-F	2/15/11	1.17	1.006	0.081	40	
MY-F	1/25/11	1.88	1.201	0.134	90	
MY-F	11/23/10	1.49	1.348	0.165	170	
MY-F	9/27/10	1.57	1.339	0.513	380	
MY-F	8/23/10	5.52	1.482	0.641	310	
MY-F	7/20/10	7.13	1.623	0.751	10	
MY-F	6/21/10	17.5	1.729	0.558	160	568
MY-F	5/18/10	79.8	1.991	0.41	50	
MY-F	4/27/10	1.99	1.558	0.497	30	
MY-F	3/23/10	2.9	1.321	0.359	40	
MY-F	2/17/10	6.43	1.273	0.249	10	
MY-F	1/5/10	10	1.322	0.163	80	
MY-F	12/22/09	15	1.366	0.154	260	
MY-F	11/24/09	6.28	2.309	0.285	430	
MY-F	10/29/09	7.26	1.905	0.282	2100	
MY-F	9/22/09	0.98	1.346	0.412	440	
MY-F	8/25/09	5.4	1.573	0.334	220	
MY-F	7/23/09	4	1.723	0.725	990	
MY-F	6/30/09	15.5	1.656	0.921	470	
MY-F	5/20/09	70.2	2.17	0	2000	
MY-F	4/8/09	84.2	1.967	0.422		
MY-F	3/18/09	22.8	1.67	0.28	200	
MY-F	2/5/09	11.4	1.613	0.296	220	
MY-F	1/21/09	7.11	1.206	0.268	260	
MY-F	12/11/08	22.6	1.134	0.34	150	
MY-F	11/24/08	23.3	1.466	0.401	30	
MY-F	10/16/08	26.2	1.541	0.472	190	
MY-F	9/16/08	10.7	1.668	0.503	140	
MY-F	8/14/08	5.33	1.543	0.47	1340	
MY-F	7/17/08	8.16	1.397	0.511	3900	
MY-F	6/30/08	35.1	1.267	0.293	300	
MY-F	5/22/08	14.7	1.556	0.335	20	

APPENDIX B

FDEP PERMIT NUMBER 12201214A

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Permit Number
01011614 Renewal 12111314 A

Florida Department of Environmental Protection
Division of Recreation and Parks
Florida Park Service

NON-COMMERCIAL RESEARCH / COLLECTING PERMIT

Park Visits Must Be Arranged A Minimum Of One Week In Advance. Failure To Make Required Arrangements Will Result In Denial Of Park Entry.
Permit Must Be Carried At All Times While Working In State Parks.

Permittee:	Address, Phone, Email:	Issue Date:
Raymond Leary	1001 Sarasota Center Blvd. Sarasota, FL 34240 jsperry@scgov.net Bus (941)861-0984 Cell (941)650-7680	1/1/2016
Representing:		Expiration Date:
Sarasota County Water Resources		1/1/2017

Additional Authorized Researchers:	Subject: Water Quality
Ashley Melton – Sarasota County John Ryan – Sarasota County Adam Olenoski - VHB T.J. Venning – VHB	Permitted Activity: Collect water samples within the Myakka River and tributaries at Myakka River State Park and South Fork creek at Oscar Scherer State Park
In the Following Park(s): Myakka River State Park Oscar Scherer State Park	Permitted Collection: Water samples

Permit Attachments:
1. Standard Conditions for Scientific Research and Collecting (6 pages)

Permit not valid unless signed by all parties.

Issuing Office

Approved By:
Valinda Subsic Bureau Chief
Name and Title
1/13/16
Date

Issuing Office Name, Address and Phone:
District 4 Administration
1843 South Tamiami Trail
Osprey, FL 34229
941-483-5944

Permittee

I have read this permit and all attachments listed above. I fully understand it, and will abide by all rules and regulations.

Approved By (Printed Name and Signature) Date:

FPS-R010 rev. 11/08/12

CC: Chris Becker
Parks Small
Captain Laura Dewald
Steven Giguere
Diana Donaghy
Tony Clements
Dan Nelson
James Oliver