



Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 1st Quarter 2019

Environmental News

International Coastal Cleanup 2019

The 2019 International Coastal Cleanup is a multi-national effort to cleanup coastal regions throughout the world.

Volunteers are needed to help in the cleanup effort! Florida has over 1,300 miles of coastline. Together volunteers can pick up litter and debris that pollutes beaches and waterways.

Sites throughout Lee County are coordinated by **Keep Lee County Beautiful, Inc.** This includes litter pick up, collection and documentation of pollution.

This is a global effort! For interested volunteers the event is scheduled to take place on Saturday, September 21 from 9:00 AM to 12:00 PM

For registration, cleanup locations around Southwest Florida and more information, please click <http://www.klcb.org/coastal-cleanup.html>

Or call Keep Lee County Beautiful Inc. at (239) 334-3488



Questions? Comments? Let us know!

(239)574-0785

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Native Plant profile

Sabatia stellaris

Marsh Pink

Marsh pink is an annual wildflower that begins appearing in late spring and flowers throughout the summer. As the common name implies, marsh pink prefers wet soils and is often found on the fringes of swamps and wet meadows in its natural settings. In urban environments it frequents ditches, swales or wet detention areas. It's often mixed with other wildflowers such as Coreopsis and Fleabane.

This "bouquet" of wildflowers attracts butterflies and other pollinators for nectar nourishment.

The flower of marsh pink has 5 bright pink petals and is easily singled out among its ditch companions. Marsh pink typically appears in vacant lots and undeveloped areas but can be a nice addition to a rain garden or low area of home landscape.



The Lake Okeechobee Strategy This Year

Many of us know that Lake Okeechobee plays a significant role in the water quality for the Caloosahatchee River and Estuary. Subtle changes in the management of Lake Okeechobee can mean the difference between a “good” year, or a “bad” year for water quality, for those downstream of the Lake. This includes the St. Lucie River and Estuary on the east coast as well.

Over the past year, the US Army Corp of Engineers (USACE) has taken a different approach in Lake Okeechobee management. The strategy they chose resulted in what is deemed, a very good year for water quality for the Caloosahatchee.

Beginning last fall, during the dry season, USACE began pulse releasing an average of 800-1000 cubic feet per second (CFS) per day, of water from Lake Okeechobee to the Caloosahatchee River at the Franklin Lock. That level of flow is considered ideal for the health of the upper and lower part of the Estuary during the dryer months. Biological indicators of this are healthy tape grass beds (*Vallisneria americana*) in the fresh water regions of the river and healthy sea grass beds and oyster reefs at the mouth of the estuary. Freshwater tape grass and sea grass meadows help uptake nutrients in the water, and oyster reefs filter feed microscopic algae out of the water. Both support good water quality.

Additionally, the other advantage in maintaining that level of flow during the dry season provides the opportunity to draw the lake down, slowly, over the course of several months. Ideally, this prepares Lake Okeechobee to better handle watershed runoff during the wet season. Because Lake Okeechobee reached an astonishing low of just over 10 feet, it had the capacity to receive waters without requiring substantial releases to the estuaries. Having considerable releases from Lake Okeechobee during the rainy season in addition to watershed runoff to the Caloosahatchee, only compounds the issue of, too much freshwater, too quickly.

I believe that water managers do not want a repeat of the 2018 Summer, in which blue green algae became problematic in Lake Okeechobee and subsequently downstream of the Lake due to high volume releases to the estuaries. Accordingly, better management of Lake Okeechobee during the 2018-2019 dry season alleviated this issue and strategies such as these are an important reminder that sharing the resource doesn't necessarily imply shared adversity.

Understandably, Cape Coral, as a coastal community, plays a vital role in our local water quality. Nevertheless, it's also important to understand that water quality, and its continued health, are a shared responsibility by the collaborative efforts of many communities throughout South Florida.

Canalwatch Extra Field Data

1st Quarter 2019

90A	Jan	Feb	Mar
DO	5.1	6.6	5.6
pH	7.8	7.8	7.8
Temp	23.0	21.0	20.0
Sal	22	15	-

59D	Jan	Feb	Mar
DO	-	5.2	-
pH	-	7.8	-
Temp	-	23.0	-
Sal	-	25	-

59C	Jan	Feb	Mar
DO	5.74	5.29	4.78
pH	7.6	7.6	7.5
Temp	22.8	22.0	23.3
Sal	21	18	16

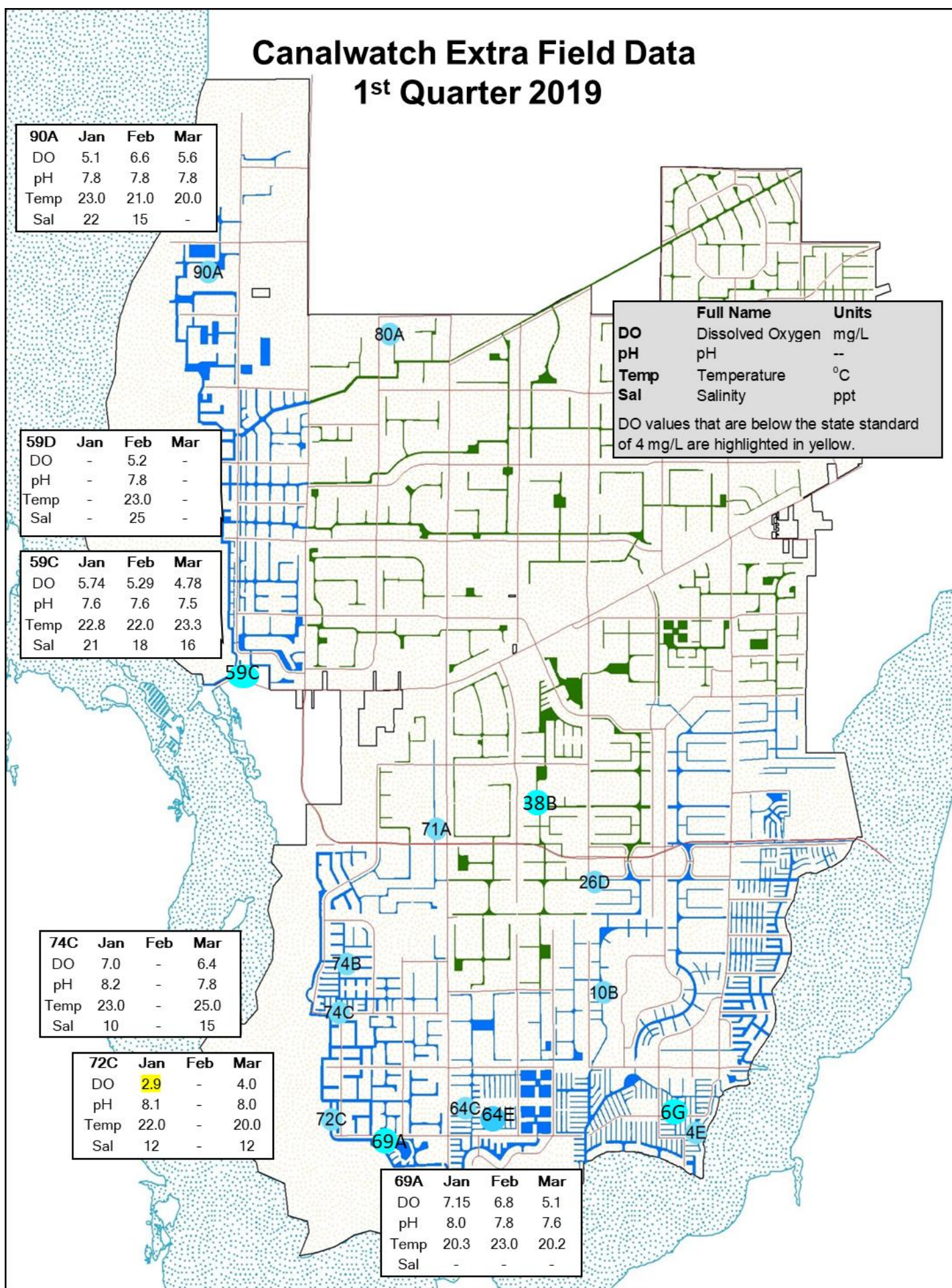
74C	Jan	Feb	Mar
DO	7.0	-	6.4
pH	8.2	-	7.8
Temp	23.0	-	25.0
Sal	10	-	15

72C	Jan	Feb	Mar
DO	2.9	-	4.0
pH	8.1	-	8.0
Temp	22.0	-	20.0
Sal	12	-	12

69A	Jan	Feb	Mar
DO	7.15	6.8	5.1
pH	8.0	7.8	7.6
Temp	20.3	23.0	20.2
Sal	-	-	-

	Full Name	Units
DO	Dissolved Oxygen	mg/L
pH	pH	--
Temp	Temperature	°C
Sal	Salinity	ppt

DO values that are below the state standard of 4 mg/L are highlighted in yellow.



	bd = below detection					benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.													
	January 2019						February 2019						March 2019						
	NO2	NO3	NH3	TKN	T-N	T-PO4	NO2	NO3	NH3	TKN	T-N	T-PO4	NO2	NO3	NH3	TKN	T-N	T-PO4	Avg
	<1.0	<1.0	none set	<2.0	<0.46		<1.0	<1.0	none set	<2.0	<0.46		<1.0	<1.0	none set	<2.0	<0.46		TSI
3F													bd	bd	0.09	0.4	0.4	0.04	42.75
5D	bd	bd	0.09	0.3	0.4	0.09	bd	bd	0.09	0.4	0.4	0.07							23.30
5H	bd	bd	0.09	0.4	0.4	0.13	bd	bd	0.09	0.4	0.4	0.08	bd	bd	0.09	0.3	0.3	0.04	32.20
6F	bd	bd	0.09	0.4	0.4	0.12	bd	bd	0.09	0.5	0.5	0.09	bd	bd	0.09	0.4	0.4	0.08	25.93
7E	bd	bd	0.09	0.4	0.2	0.13	bd	bd	0.09	0.4	0.4	0.12	bd	bd	0.09	0.4	0.4	0.05	33.07
10C	bd	bd	0.09	0.2	0.4	0.06													36.87
11E	bd	bd	0.09	0.4	0.4	0.13	bd	bd	0.09	0.5	0.5	0.10	bd	bd	0.09	0.4	0.4	0.06	31.31
12H							bd	bd	0.09	0.4	0.4	0.11	bd	bd	0.09	0.4	0.4	0.05	33.76
16E	bd	bd	0.09	0.4	1.8	0.04	bd	bd	0.09	0.3	0.3	0.04	bd	bd	0.09	0.2	0.2	0.03	44.14
16H	bd	bd	0.09	1.8	0.8	0.04	bd	bd	0.09	0.3	0.3	0.05	bd	bd	0.09	0.5	0.5	0.03	43.06
18J	bd	0.14	0.09	0.8	0.5	0.05	bd	bd	0.09	0.4	0.4	0.05	bd	bd	0.09	0.5	0.5	0.16	37.49
18K	bd	bd	0.09	0.5	0.4	0.06	bd	bd	0.09	0.5	0.5	0.09							30.99
18M							bd	bd	0.09	0.7	0.7	0.16							33.42
18M	bd	0.08	0.09	0.4	0.4	0.06							bd	bd	0.09	0.3	0.3	0.03	41.89
19D	bd	bd	0.09	0.4	0.5	0.12	bd	bd	0.09	0.5	0.5	0.11	bd	bd	0.09	0.4	0.4	0.05	32.26
19K	bd	bd	0.09	0.5	0.5	0.12	bd	bd	0.09	0.6	0.6	0.17							31.77
21D	bd	bd	0.09	0.5	0.5	0.1	bd	bd	0.09	0.4	0.4	0.09	bd	bd	0.09	0.4	0.4	0.08	25.06
28D							bd	0.05	0.09	0.5	0.5	0.05	bd	bd	0.09	0.3	0.3	0.03	43.22
41B	bd	bd	0.09	0.6	0.6	0.04	bd	bd	0.09	0.3	0.3	0.05	bd	bd	0.09	0.2	0.2	0.02	45.02
45D	bd	bd	0.09	0.4	0.4	0.04	bd	bd	0.09	0.3	0.3	0.04	bd	bd	0.09	0.3	0.3	0.02	46.10
48A	bd	bd	0.09	0.7	0.7	0.06	bd	bd	0.09	0.3	0.3	0.03							41.89
58I	bd	bd	0.09	0.3	0.3	0.06	bd	bd	0.09	0.4	0.4	0.04	bd	bd	0.09	0.2	0.2	0.02	44.14
58J	bd	bd	0.09	0.5	0.5	0.05	bd	bd	0.09	0.2	0.2	0.04	bd	bd	0.09	0.3	0.3	0.02	45.02
59C	bd	bd	0.09	0.4	0.4	0.04	bd	bd	0.09	0.2	0.2	0.04	bd	bd	0.09	0.1	0.1	0.03	44.14
59D							bd	bd	0.09	0.4	0.4	0.04							42.75

64B							bd	bd	0.09	0.2	0.2	0.08	bd	bd	0.09	0.1	0.1	0.05	31.47
64F	bd	bd	0.09	0.2	0.2	0.11													28.01
65C	bd	bd	0.09	0.3	0.3	0.12	bd	bd	0.09	0.2	0.2	0.08	bd	bd	0.09	0.3	0.3	0.07	24.72
66D	bd	bd	0.09	0.5	0.5	0.06	bd	bd	0.09	0.5	0.5	0.07	bd	bd	0.09	0.0	0.0	0.02	37.05
69A	bd	bd	0.09	0.7	0.7	0.16	bd	0.10	0.09	0.6	0.6	0.20	bd	bd	0.09	0.7	0.7	0.09	31.72
71B	bd	0.13	0.09	0.6	0.6	0.07	bd	bd	0.09	0.4	0.4	0.06	bd	bd	0.09	0.3	0.3	0.03	35.09
72C	bd	bd	0.09	0.3	0.3	0.09							bd	bd	0.09	0.3	0.3	0.05	32.32
72E	bd	bd	0.09	0.4	0.4	0.1	bd	bd	0.09	0.3	0.3	0.09							25.88
74C	bd	bd	0.09	0.3	0.3	0.12							bd	bd	0.09	0.3	0.3	0.06	33.06
82A	bd	bd	0.09	0.4	0.4	0.04	bd	bd	0.09	0.2	0.2	0.04	bd	bd	0.09	0.4	0.4	0.02	44.14
83C	bd	bd	0.09	0.3	0.3	0.04	bd	bd	0.09	0.3	0.3	0.04	bd	bd	0.09	0.4	0.4	0.03	46.10
89A	bd	bd	0.09	0.7	0.7	0.2	bd	bd	0.09	0.5	0.5	0.12	bd	bd	0.09	0.3	0.3	0.10	36.23
90A	bd	bd	0.09	0.5	0.5	0.04	bd	bd	0.09	0.5	0.5	0.04	bd	bd	0.09	0.6	0.6	0.02	44.14
96A							bd	bd	0.09	0.2	0.2	0.04	bd	bd	0.09	0.2	0.2	0.03	44.83
Median	bd0.090.400.400.07						bd0.090.400.400.07						bd0.090.300.300.04						36.23
Max	0.140.091.801.800.20						0.100.090.700.700.20						0.000.090.700.700.16						46.1

NO2 = Nitrite (inorganic)	TKN = Total Kjeldahl Nitrogen (organic + NH4)	High levels of nutrients in our canals can indicate the presence of fertilizer runoff or effluent from wastewater or septic systems. Excessive nutrients can lead to nuisance plant growth and algal blooms.
NO3 = Nitrate (inorganic)	TN = Total Nitrogen (inorganic + organic)	
NH3 = Ammonia (inorganic)	TP04 = Total Phosphate	

All nutrient concentrations shown in mg/L

TSI = Trophic State Index, a quick indicator of canal health. TSI = Trophic State Index, a quick indicator of canal health. 39 sites this quarter scored as GOOD (<60). zero sites scored FAIR (60-70), and zero scored POOR (>70). First quarter 2019 water quality continued with the improving trend since forth quarter 2018. The dry season gave the Caloosahatchee ample time to recover from the previous summer's blue green algae crisis. Many of Cape Coral's canal waterways saw benefits as well with improved water clarity and a return to saline conditions for the tidally influenced canals. The above "good" TSI values for all sites reflects that many sites recorded ideal Secchi disk values for the first part of 2019.

Upcoming Events

Free Gardening Series Offered by the Lee County Master Gardeners

Clean Waterways	October 11 th
Gardening Tool Selection	October 25 th
Container Gardening	November 8 th
Florida Rain Gardens	November 22 nd
Growing Orchids	December 6 th

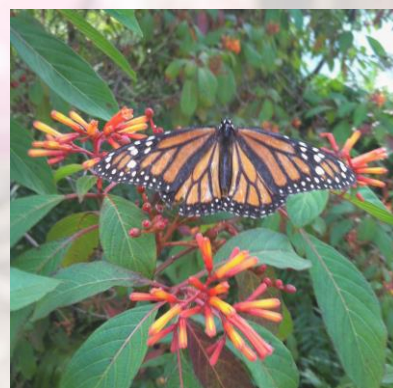
All programs held on Fridays (on selected dates) from 9:00 am to 10:30 am at Rotary Park Environmental Center. 5505 Rose Garden Rd. Please register in advance by calling 239-549-4606 or Emailing at rotaryparkinfo@capecoral.net.

Florida Friendly Landscaping

Upcoming Introductory Classes at Rotary Park Environmental Center

Saturday September 28th 10:00 am to 12:00 pm
Thursday October 24th 1:00pm to 3:00 pm

Please register in advance by calling 239-549-4606 or
Emailing at rotaryparkinfo@capecoral.net.



City of Cape Coral
Environmental Resources Division
C/O Canalwatch Volunteer Program
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