Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 3rd and 4th Quarter 2018

Environmental News

New Okeechobee Management Operations

The U.S. Army Corps of Engineers (USACE) is seeking public input on the development of a new water release schedule for Lake Okeechobee. The current Lake Okeechobee Regulation Schedule (LORS) has been in operation since 2008. The new proposed schedule will be the Lake Okeechobee System Operating Manual (LOSOM). LOSOM will base water releases on lake levels, expected rainfall, time of year, salinity of the estuaries (both east and west coast) and other conditions. USACE is currently developing LOSOM and is requesting comments until April 22nd. All comments will be considered and will include such stakeholder interest as: drinking water supply, recreation, agriculture, water releases to the estuaries and environmental needs. Please consider contacting USACE regarding your comments or concerns regarding the development of LOSOM. Comment period ends on April 22nd.

More information and a link to post comments can be found here
https://www.saj.usace.army.mil/LOSOM/

Questions? Comments? Let us know!
(239)574-0785
Harry: hphillips@capecoral.net
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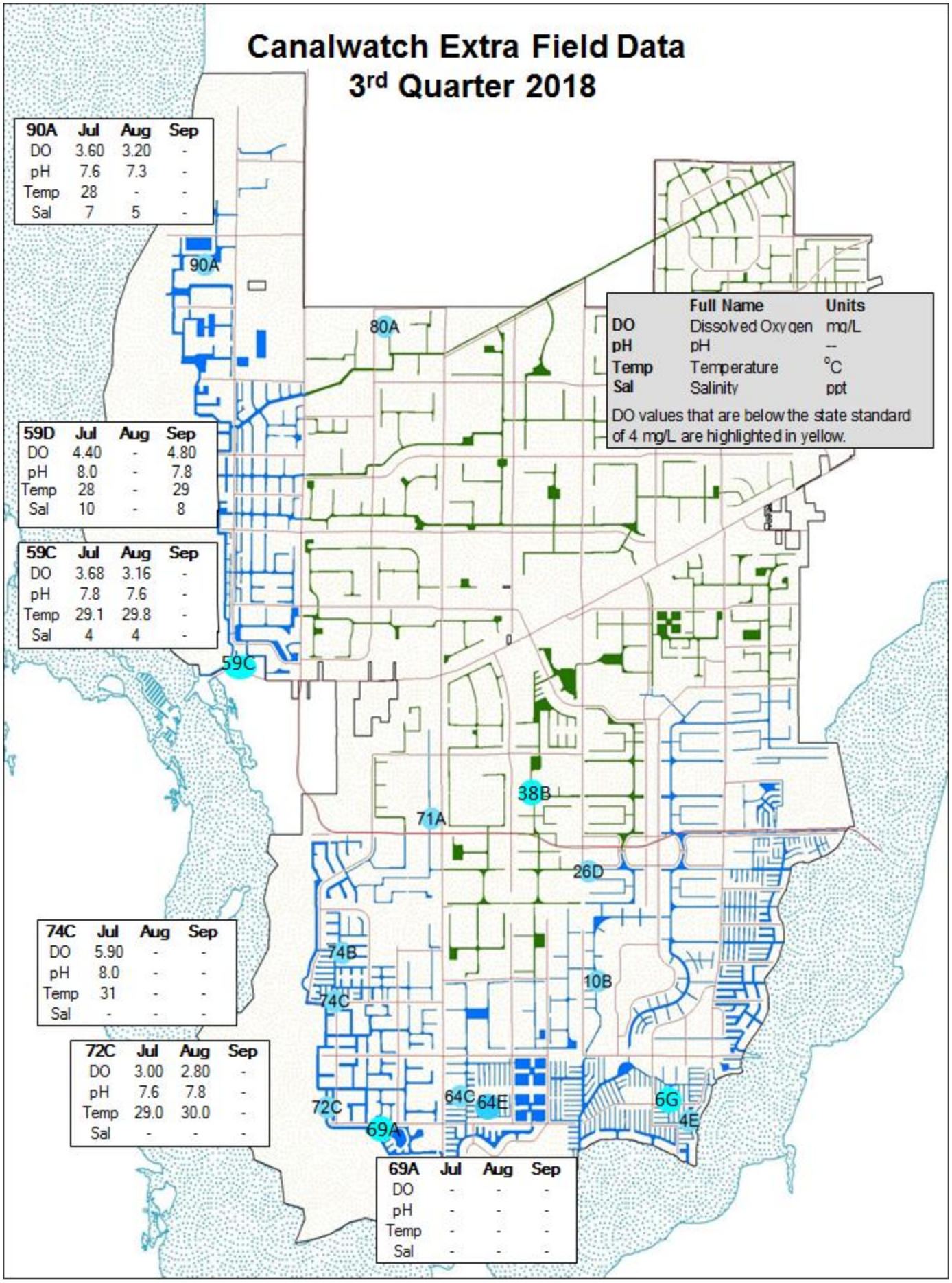
Native Plant profile

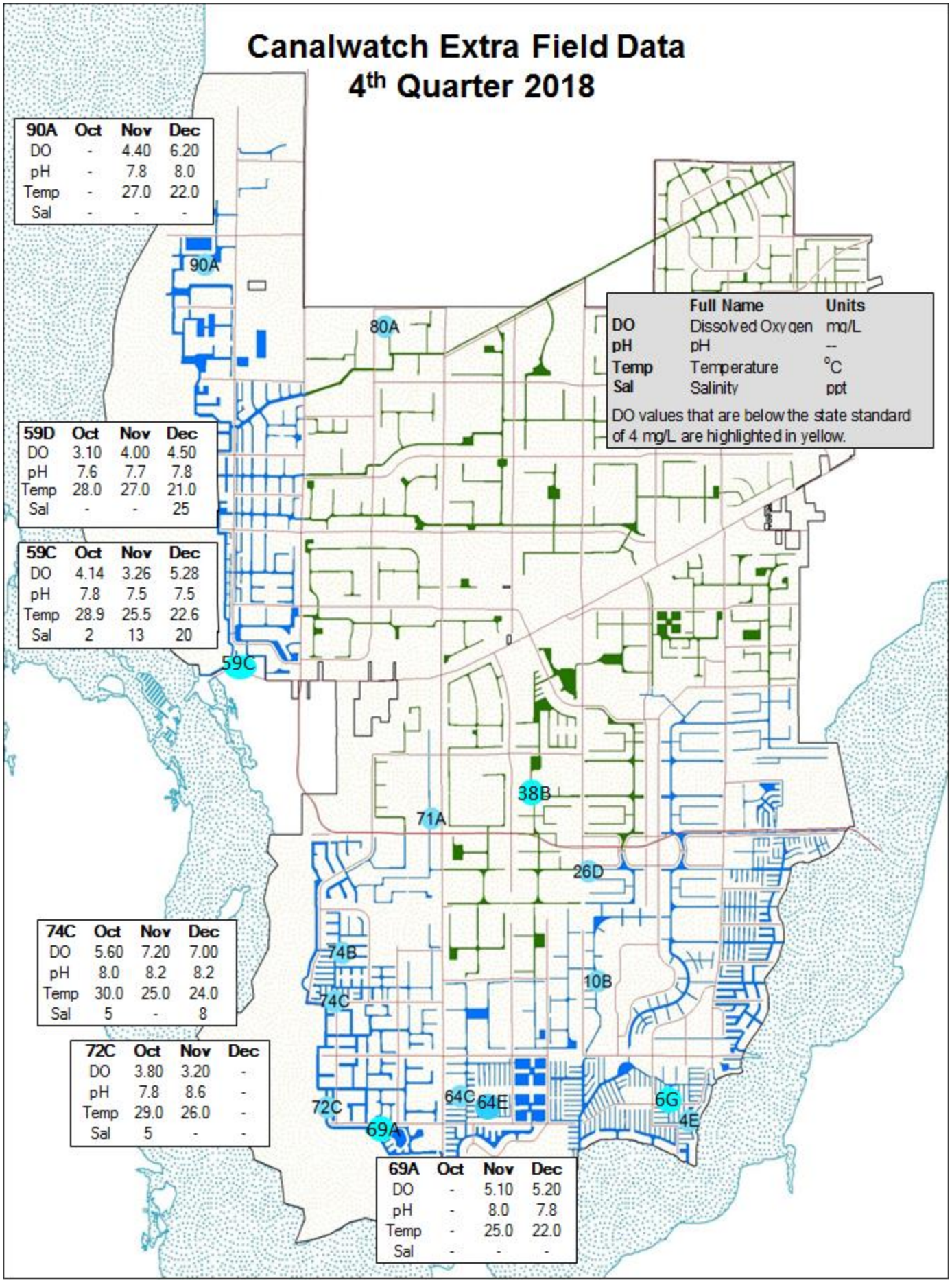
Vallisneria Americana
American eel grass

American eel-grass, sometimes referred to as tape-grass, is a submersed aquatic perennial plant that is native to much of north America. Eel-grass is found in many freshwater and brackish habitats throughout its native range. This includes ponds, lakes, rivers and estuaries in all ranges of flow; from still waters to swift currents. Eel grass is found locally within Cape Coral's canals and the Caloosahatchee River. Despite the common name, eel-grass is not a true grass, such as one that grows in lawns. However, there are some similarities. Eel-grass does spread by runners under the sediment and can often grow in such densities that it resembles an underwater pasture or grassland. In shallower waterbodies it often "tops out" in which the blade like leaves are sometimes floating at the water surface. Eel-grass leaves develop and grow from clusters of roots and there are separate male and female flowers. Male flower structures break off and float to pollinate the female flowers that develop on long stalks; fruiting ensues. Eel-grass fruit is a small elongated capsule which contain numerous seeds.
Eel-grass is an important submerged plant that provides habitat for countless aquatic and marine animal species. It is also valuable for water quality in its ability to uptake nutrients and improve water clarity. Home applications include aquaria, ponds or water gardens.

Photos courtesy of UF/IFAS Center for Aquatic and Invasive Plants.

UF | IFAS
UNIVERSITY of FLORIDA


Canalwatch Extra Field Data
3rd Quarter 2018
90A Jul Aug Sep
DO 3.60 3.20 -
pH 7.6 7.3 -
Temp 28 - -
Sal 7 5 -
90A
80A
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.
59D Jul Aug Sep
DO 4.40 - 4.80
pH 8.0 - 7.8
Temp 28 - 29
Sal 10 - 8
59C Jul Aug Sep
DO 3.68 3.16 -
pH 7.8 7.6 -
Temp 29.1 29.8 -
Sal 4 4 -
59C
38B
71A
26D
74C Jul Aug Sep
DO 5.90 - -
pH 8.0 - -
Temp 31 - -
Sal - - -
74B
74C
10B
72C Jul Aug Sep
DO 3.00 2.80 -
pH 7.6 7.8 -
Temp 29.0 30.0 -
Sal - - -
72C
64C
64E
6G
4E
69A
69A Jul Aug Sep
DO - - -
pH - - -
Temp - - -
Sal - - -


Canalwatch Extra Field Data
4th Quarter 2018
90A Oct Nov Dec
DO - 4.40 6.20
pH - 7.8 8.0
Temp - 27.0 22.0
Sal - - -
90A
80A
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.
59D Oct Nov Dec
DO 3.10 4.00 4.50
pH 7.6 7.7 7.8
Temp 28.0 27.0 21.0
Sal - - 25
59C Oct Nov Dec
DO 4.14 3.26 5.28
pH 7.8 7.5 7.5
Temp 28.9 25.5 22.6
Sal 2 13 20
59C
38B
71A
26D
74C Oct Nov Dec
DO 5.60 7.20 7.00
pH 8.0 8.2 8.2
Temp 30.0 25.0 24.0
Sal 5 - 8
74B
10B
74C
72C Oct Nov Dec
DO 3.80 3.20 -
pH 7.8 8.6 -
Temp 29.0 26.0 -
Sal 5 - -
72C
64C
64E
6G
4E
69A
69A Oct Nov Dec
DO - 5.10 5.20
pH - 8.0 7.8
Temp - 25.0 22.0
Sal - - -

bd = below detection | benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.

	July 2018						August 2018						September 2018						
	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	0.11	0.05	0.7	0.7	0.14													50.59
5D							bd	bd	0.09	0.9	0.9	0.12							63.18
6F	bd	bd	0.05	1.1	1.1	0.26	bd	bd	0.09	1.2	1.2	0.28	bd	bd	0.09	0.1	0.1	0.27	44.19
7E	bd	0.16	0.05	0.9	0.9	0.24													68.70
10C	bd	0.07	0.05	0.6	0.6	0.11	bd	bd	0.09	0.6	0.6	0.09							48.36
11E	bd	bd	0.09	14.0	14.0	1.17													92.74
16E	bd	bd	0.09	0.4	0.4	0.02	bd	bd	0.09	0.5	0.5	0.03	bd	bd	0.09	0.09	0.1	0.02	44.65
16H	bd	bd	0.09	0.4	0.4	0.02													37.59
18J							bd	bd	0.09	0.4	0.4	0.05	bd	bd	0.09	0.09	0.1	0.04	44.86
18K	bd	bd	0.09	0.5	0.5	0.04	bd	bd	0.09	0.5	0.5	0.05	bd	bd	0.09	0.09	0.1	0.04	49.13
18M							bd	bd	0.09	0.6	0.6	0.07	bd	bd	0.09	0.1	0.1	0.06	44.37
19D							bd	bd	0.09	1.9	1.9	0.30							77.86
19K	bd	bd	0.09	1.8	1.8	0.26							bd	0.10	0.09	0.7	0.8	0.24	63.80
21D	bd	bd	0.09	0.6	0.6	0.10	bd	bd	0.09	0.7	0.7	0.11							54.28
28D	bd	bd	0.09	0.3	0.3	0.04	bd	bd	0.09	2.5	2.5	0.12	bd	bd	0.09	0.1	0.1	0.05	51.36
38B	bd	bd	0.09	0.6	0.6	0.03							bd	bd	0.09	0.1	0.1	0.03	41.23
41B	bd	bd	0.09	0.7	0.7	0.04	bd	bd	0.09	0.5	0.5	0.03	bd	bd	0.09	0.1	0.1	0.03	31.05
45D	bd	bd	0.09	0.5	0.5	0.02	bd	bd	0.09	0.5	0.5	0.03	bd	bd	0.09	0.1	0.1	0.03	40.83
48A	bd	bd	0.09	0.5	0.5	0.01	bd	bd	0.09	0.4	0.4	0.02	bd	bd	0.09	0.1	0.1	0.03	38.47
58I	bd	bd	0.09	0.8	0.8	0.03							bd	bd	0.09	0.1	0.1	0.03	38.52
58J	bd	bd	0.09	1.1	1.1	0.03	bd	bd	0.09	1.1	1.1	0.05	bd	bd	0.09	0.1	0.1	0.05	45.44
59C	bd	bd	0.09	0.7	0.7	0.02	bd	bd	0.09	0.5	0.5	0.04	bd	bd	0.09	0.1	0.1	0.03	41.24
59D	bd	bd	0.09	0.6	0.6	0.02							bd	bd	0.09	0.1	0.1	0.03	44.26
64B							bd	0.14	0.09	0.7	0.84	0.14							45.27

65C	bd	bd	0.09	1.6	1.6	0.13	bd	0.06	0.09	1.0	1.06	0.14	0.05	0.20	0.09	0.1	0.1	0.22	52.15
66D	bd	bd	0.09	0.9	0.9	0.03	bd	bd	0.09	0.9	0.9	0.14	bd	bd	0.09	0.1	0.1	0.07	44.47
71B	bd	bd	0.09	0.9	0.9	0.07	bd	bd	0.09	0.7	0.7	0.04	bd	bd	0.09	0.1	0.1	0.10	48.37
72C	bd	bd	0.09	0.8	0.8	0.09	bd	bd	0.09	0.8	0.8	0.06							72.36
72E	bd	bd	0.09	0.8	0.8	0.09													48.74
74C	bd	bd	0.09	0.8	0.8	0.08													50.92
82A	bd	bd	0.09	0.8	0.8	0.03	bd	bd	0.09	0.8	0.8	0.05	bd	bd	0.09	0.1	0.1	0.05	50.73
83C	bd	bd	0.09	1.0	1.0	0.02							bd	bd	0.09	0.1	0.1	0.04	37.84
89A	bd	0.06	0.09	1.5	1.5	0.29	bd	bd	0.09	1.0	1.0	0.21							66.67
90A	bd	bd	0.09	1.3	1.3	0.05	bd	bd	0.09	1.0	1.0	0.03							59.54
Median		**0.09**	**0.09**	**0.80**	**0.80**	**0.04**		**0.10**	**0.09**	**0.70**	**0.80**	**0.06**		**0.15**	**0.09**	**0.09**	**0.09**	**0.04**	**48.37**
Max		**0.16**	**0.09**	**14.00**	**14.00**	**1.17**		**0.14**	**0.09**	**2.50**	**2.50**	**0.30**		**0.20**	**0.09**	**0.70**	**0.80**	**0.27**	**92.74**

NO2 = Nitrite (inorganic)	TKN = Total Kjeldahl Nitrogen (organic + NH4)
NO3 = Nitrate (inorganic)	TN = Total Nitrogen (inorganic + organic)
NH3 = Ammonia (inorganic)	TPO4 = Total Phosphate

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.

All nutrient concentrations shown in mg/L

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A total of 27 sites this quarter scored as GOOD (<60). 4 sites scored FAIR (60-70), and 3 scored POOR (>70).
Summer 2018 was a challenging time for water quality for much of South Florida. Red tide conditions continued off the coast in the Gulf of Mexico for all of SW Florida. The Caloosahatchee River was still influenced by the water releases up stream, and combined with ample rainfall for the area, the state of the River continued to deteriorate. The Cyanobacteria and Red Tide conditions have improved at the time of this report. This is attributed to the decreased flows from upstream, a dryer, cooler weather pattern and cooler water temperatures.

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.														
	October 2018						November 2018						September 2018						
	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	0.1	0.6	0.6	0.11	bd	bd	0.1	0.1	0.1	0.12							37.61
5D	bd	bd	0.1	0.7	0.75	0.19	bd	bd	0.1	0.7	0.7	0.12	bd	bd	0.1	0.4	0.4	0.10	45.05
5H													bd	bd	0.1	0.7	0.7	0.10	48.94
6F	bd	bd	0.1	0.6	0.6	0.25	bd	bd	0.1	0.1	0.1	0.15	bd	bd	0.1	0.4	0.4	0.13	42.26
7E													bd	bd	0.1	0.3	0.3	0.14	34.89
10C							bd	bd	0.1	0.1	0.1	0.12	bd	bd	0.1	0.5	0.5	0.08	37.50
11E	bd	0.27	0.1	0.5	0.77	0.25	bd	bd	0.1	0.2	0.2	0.16	bd	bd	0.1	0.6	0.6	0.15	52.74
12H	bd	0.11	0.1	0.6	0.71	0.22	bd	bd	0.1	0.2	0.2	0.14	bd	bd	0.1	0.4	0.4	0.15	41.08
16E	bd	bd	0.1	0.4	0.4	0.03	bd	bd	0.1	0.4	0.4	0.05	bd	bd	0.1	0.6	0.6	0.03	39.61
16H	bd	bd	0.1	0.2	0.2	0.03	bd	bd	0.1	0.5	0.5	0.08							34.48
18J	bd	bd	0.1	0.3	0.3	0.06	bd	0.13	0.1	0.3	0.3	0.05	bd	0.20	0.1	0.5	0.5	0.04	50.63
18K							bd	bd	0.1	0.2	0.2	0.06	bd	0.07	0.1	0.6	0.6	0.06	47.62
18L	bd	bd	0.1	0.6	0.6	0.18	bd	bd	0.1	0.2	0.2	0.15	bd	bd	0.1	0.5	0.5	0.18	45.37
18M	bd	bd	0.1	0.3	0.3	0.07	bd	bd	0.1	0.4	0.4	0.07	bd	0.10	0.1	0.5	0.5	0.06	44.59
19D	bd	bd	0.1	1.3	1.3	0.34	bd	bd	0.1	0.1	0.1	0.16	bd	bd	0.1	0.5	0.5	0.35	44.41
19K	bd	bd	0.1	1.1	1.1	0.26	bd	bd	0.1	0.1	0.1	0.17	bd	bd	0.1	0.5	0.5	0.22	38.92
21D	bd	bd	0.1	0.3	0.3	0.14	bd	bd	0.1	0.2	0.2	0.14	bd	bd	0.1	0.4	0.4	0.14	35.70
28D	bd	bd	0.1	0.2	0.2	0.04	bd	bd	0.1	0.5	0.5	0.05	bd	bd	0.1	0.5	0.5	0.06	38.24
38B	bd	bd	0.1	0.4	0.4	0.05	bd	bd	0.1	0.4	0.4	0.05							12.51
41B	bd	bd	0.1	0.4	0.4	0.05	bd	bd	0.1	0.5	0.5	0.05	bd	bd	0.1	0.5	0.5	0.04	44.14
45D	bd	bd	0.1	0.2	0.2	0.03	bd	bd	0.1	0.1	0.1	0.06	bd	bd	0.1	0.4	0.4	0.02	29.58
48A							bd	bd	0.1	0.6	0.6	0.05	bd	bd	0.1	0.3	0.3	0.02	44.53
58I	bd	bd	0.1	0.3	0.3	0.03	bd	bd	0.1	0.2	0.2	0.12	bd	bd	0.1	0.5	0.5	0.18	40.75
58J	bd	bd	0.1	0.6	0.6	0.05	bd	bd	0.1	0.8	0.8	0.10	bd	bd	0.1	0.6	0.6	0.14	49.88
59C	bd	bd	0.1	0.3	0.3	0.04	bd	bd	0.1	0.1	0.1	0.09	bd	bd	0.1	0.5	0.5	0.07	39.16
59D	bd	bd	0.1	0.6	0.6	0.07	bd	bd	0.1	0.5	0.5	0.13	bd	bd	0.1	0.5	0.5	0.13	43.48
64B	bd	0.11	0.1	0.2	0.31	0.15													34.34

64F	bd	0.09	0.1	0.2	0.29	0.18													40.19
65C	bd	bd	0.1	0.3	0.3	0.18													22.92
66D	bd	bd	0.1	0.3	0.3	0.07	bd	bd	0.1	0.5	0.5	0.07	bd	bd	0.1	0.5	0.5	0.05	49.47
69A							bd	bd	0.1	0.8	0.8	0.19	bd	bd	0.1	0.7	0.7	0.18	50.32
71B							bd	0.07	0.1	0.2	0.2	0.11							24.13
72C	bd	bd	0.1	0.3	0.3	0.13	bd	bd	0.1	0.2	0.2	0.11							40.35
72E	bd	bd	0.1	4.8	4.8	0.13	bd	bd	0.1	0.3	0.3	0.12	bd	bd	0.1	0.7	0.7	0.09	47.79
74C	bd	bd	0.1	0.2	0.2	0.15	bd	bd	0.1	0.3	0.3	0.14	bd	bd	0.1	0.6	0.6	0.12	41.43
82A	bd	bd	0.1	0.3	0.3	0.06	bd	bd	0.1	0.4	0.4	0.06	bd	bd	0.1	0.4	0.4	0.03	48.75
83C	bd	bd	0.1	0.4	0.4	0.05	bd	bd	0.1	0.2	0.2	0.06							42.93
89A	bd	bd	0.1	0.6	0.8	0.26	bd	bd	0.1	0.4	0.4	0.20	bd	bd	0.1	0.7	0.7	0.23	55.01
90A							bd	bd	0.1	0.8	0.8	0.08	bd	bd	0.1	0.6	0.60	0.03	51.80
Median		**bd**	**0.10**	**0.40**	**0.40**	**0.07**		**bd**	**0.10**	**0.30**	**0.30**	**0.10**		**0.10**	**bd**	**0.50**	**0.50**	**0.10**	**42.26**
Max		**0.27**	**0.10**	**4.80**	**4.80**	**0.34**		**0.13**	**0.10**	**0.80**	**0.80**	**0.20**		**0.20**	**0.10**	**0.70**	**0.70**	**0.35**	**55.01**

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Upcoming Events

Keep Lee County Beautiful and its sponsors are holding their annual Great American Cleanup. This cleanup event will take place on April 13th at numerous locations throughout the County. For more information and registration for the event, please use the link below or contact KLCB at (239) 334- 3488. The Great American Cleanup is a great way to help your community and the environment.
http://www.klcb.org/great-american-cleanup.html

Spring plant sale and rain barrel workshop at Rotary Park. Come celebrate spring with a variety of plants! On April 20th at Rotary Park, native, edible, and butterfly attracting will be among the many different plants offered. Don't miss out on this one day only sale.

Accompanying the plant sale is the rain barrel workshop. Lee County Master Gardeners will be on hand to teach about the benefits of collecting and storing stormwater for home use. Pre-registration required. The rain barrel course and one rain barrel is $45 per person. For more information on both the plant sale and the rain barrel workshop, please contact Rotary Park at 239-549-4606.

City of Cape Coral
Environmental Resources Division
C/O Canalwatch Volunteer Program
P.O. Box 150027
Cape Coral, FL 33915