Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 3rd Quarter 2017

Environmental News

Mangrove Mania and The Coastal Cleanup

Red Mangroves are a crucial component to the coastal ecosystems of Florida. They provide many benefits for both the environment and provide valuable ecosystem services for coastal communities. Because of their importance, red mangroves are protected by the State of Florida. Each year Keep Lee County Beautiful (KLCB) coordinates the Mangrove Mania; a habitat restoration project in which volunteers plant red mangroves. This year's event was on September 23rd.

Once again this year, the Northwest Cape Coral Spreader Canal was a recipient site. Volunteers in paddle craft and boats planted about 10,000 red mangrove propagules. Ding Darling National Wildlife Refuge was another recipient site with about 3,500 propagules being planted.

Another KLCB event that, while delayed due to Hurricane Irma, was still a success, was The Coastal Cleanup. On October 14th about 800 volunteers picked up 4,530 pounds of trash and debris throughout Lee Counties coastal areas. This included Cape Coral's Eco Preserve and Jaycee Park. According to KLCB, cigarette butts were the number one debris item totaling 3,833 each. Styrofoam debris was also abundant in the cleanup areas.

Questions? Comments? Let us know!
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Native Plant profile

Goldenrod
Solidago stricta

When hiking though pine woods in Southwest Florida during the fall one may be greeted with the beautiful yellow burst of the goldenrod. This multi-flowered wildflower is often found on the edges of wetlands, ponds or low areas in relatively upland habitat.

A similar species, the seaside goldenrod (*Solidago sempervirens*), is a more coastal salt tolerant variety often found among mangroves in a maritime forest.

Both examples have usefulness in bringing colorful height to a butterfly garden or flower bed. Goldenrod will fare better in moister areas of the home landscape, but there are some varieties that can tolerate dryer soils.

Goldenrod (*Solidago stricta*)

Eagle Watch Program

The Cape Coral Eagle Watch Program is a network of volunteers that assists in monitoring and documenting the behavior of Bald Eagles throughout their nesting season. The Bald Eagle nesting season begins in October and ends May 15th. This volunteer program is in its sixth year and is beneficial to both the Bald Eagle, wildlife conservation scientists and Cape Coral's community development staff.

City of Cape Coral staff will monitor and inspect nesting sites throughout the year and especially during the Bald Eagle nesting season, however, having supplemental data provided through the Eagle Watch Program will expand the knowledge on this Federally protected species.

Within the city limits of Cape Coral there are eight active Bald Eagle nest sites. Ideally, each nest site should have one volunteer monitor, however, a single volunteer is welcome to monitor up to three nest sites.

If interested in becoming part of the Eagle Watch Program or for more information, please contact

Justin Heller, Environmental Planner and coordinator for the
Cape Coral Eagle Watch Program.

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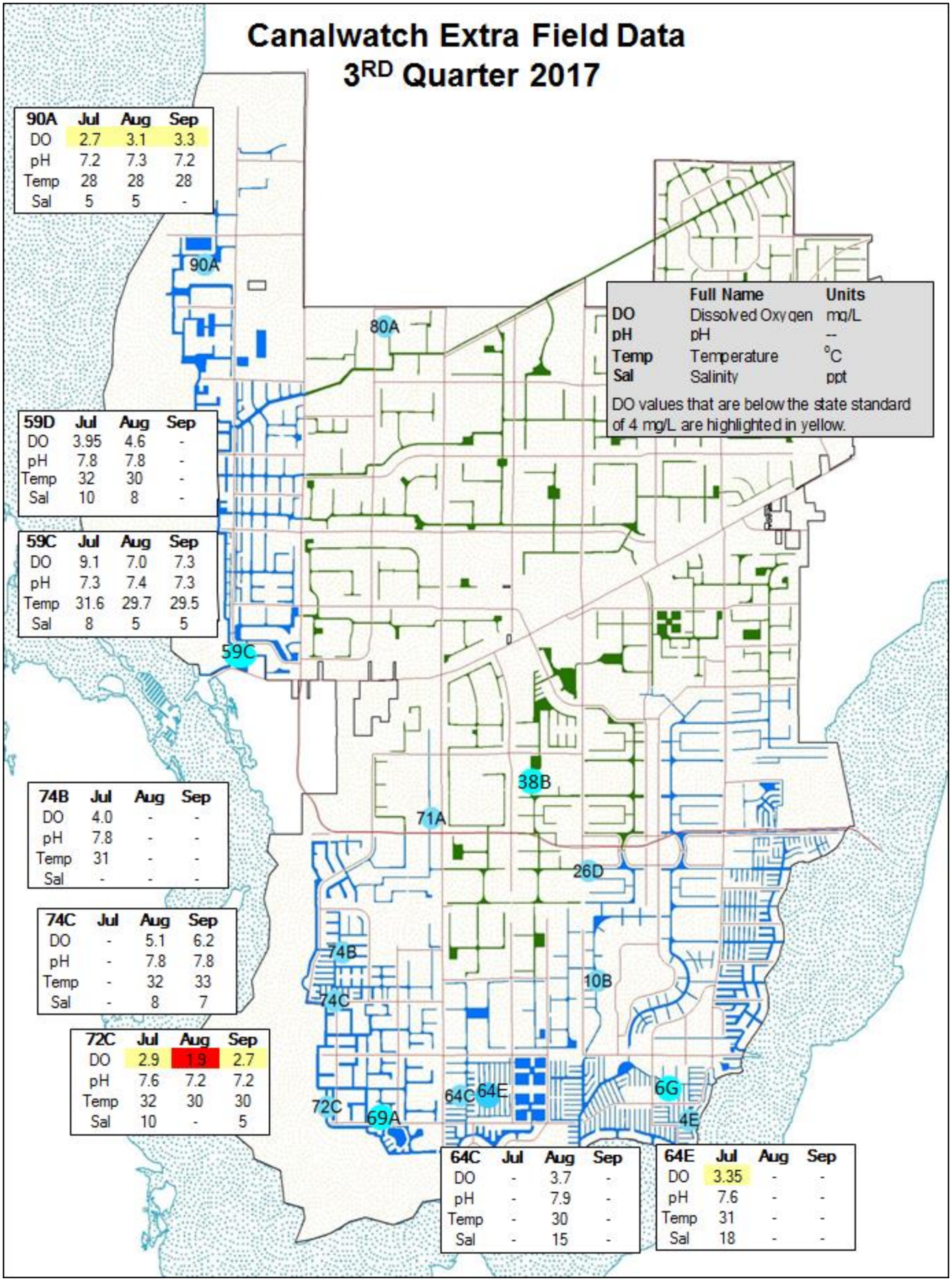
Canalwatch Extra Field Data
3RD Quarter 2017



90A	Jul	Aug	Sep
DO	2.7	3.1	3.3
pH	7.2	7.3	7.2
Temp	28	28	28
Sal	5	5	-

59D	Jul	Aug	Sep
DO	3.95	4.6	-
pH	7.8	7.8	-
Temp	32	30	-
Sal	10	8	-

59C	Jul	Aug	Sep
DO	9.1	7.0	7.3
pH	7.3	7.4	7.3
Temp	31.6	29.7	29.5
Sal	8	5	5

	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.

74B	Jul	Aug	Sep
DO	4.0	-	-
pH	7.8	-	-
Temp	31	-	-
Sal	-	-	-

74C	Jul	Aug	Sep
DO	-	5.1	6.2
pH	-	7.8	7.8
Temp	-	32	33
Sal	-	8	7

72C	Jul	Aug	Sep
DO	2.9	1.9	2.7
pH	7.6	7.2	7.2
Temp	32	30	30
Sal	10	-	5

64C	Jul	Aug	Sep
DO	-	3.7	-
pH	-	7.9	-
Temp	-	30	-
Sal	-	15	-

64E	Jul	Aug	Sep
DO	3.35	-	-
pH	7.6	-	-
Temp	31	-	-
Sal	18	-	-

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.														
	July 2017						August 2017						September 2017						
	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
5D							bd	0.08	0.05	0.2	0.2	0.17							24.13
6F	bd	bd	0.05	0.4	0.4	0.10	bd	bd	0.7	0.7	0.7	0.07	bd	bd	0.1	0.05	0.1	0.17	39.01
7E	bd	bd	0.05	0.1	0.1	0.17	bd	0.13	0.8	0.8	0.8	0.20							48.60
10C	bd	bd	0.05	0.1	0.1	0.04	bd	0.06	0.4	0.4	0.4	0.15	bd	bd	0.05	0.05	0.1	0.06	38.49
11E	bd	0.07	0.05	0.3	0.3	0.19	bd	0.13	0.05	0.3	0.3	0.01	bd	0.2	0.1	0.05	0.1	0.24	42.14
12H	bd	bd	0.05	0.2	0.2	0.09	bd	bd	0.3	0.3	0.3	0.01							42.81
16E	bd	bd	0.05	0.2	0.2	0.02	bd	0.08	0.2	0.2	0.2	0.01	bd	bd	0.05	0.05	0.1	0.03	27.50
16H	bd	bd	0.05	0.1	0.1	0.02	bd	bd	0.2	0.2	0.2	0.15							24.00
18J	bd	bd	0.05	0.1	0.1	0.03							bd	bd	0.1	0.05	0.1	0.07	39.61
18K	bd	bd	0.05	0.1	0.1	0.03	bd	bd	0.05	0.2	0.2	0.17	bd	bd	0.05	0.05	0.1	0.03	34.42
18L	bd	bd	0.05	0.1	0.1	0.15	bd	0.11	0.1	0.2	0.2	0.17	bd	bd	0.5	0.05	0.1	0.13	33.30
19D							bd	0.07	0.4	0.4	0.4	0.09	bd	bd	0.05	0.05	0.1	0.17	39.77
19K							bd	bd	0.1	0.2	0.2	0.01	bd	bd	0.05	0.05	0.1	0.15	35.25
21D	bd	bd	0.05	0.1	0.1	0.12	bd	0.05	0.2	0.2	0.2	0.01	bd	bd	0.05	0.05	0.1	0.08	36.37
23C	bd	bd	0.05	0.1	0.1	0.02	bd	0.10	0.1	0.1	0.1	0.01							17.42
28D	bd	bd	0.05	0.1	0.1	0.20	bd	0.15	0.5	0.5	0.5	0.01	bd	bd	0.05	0.2	0.2	0.09	38.61
31C							bd	bd	0.1	0.1	0.1	0.06							10.41
38B							bd	bd	0.05	0.3	0.3	0.01							43.91
41A	bd	bd	0.05	0.05	0.1	0.02	bd	bd	0.05	0.2	0.2	0.01							24.28
41B	bd	bd	0.05	0.05	0.1	0.03	bd	bd	0.05	0.1	0.1	0.01	bd	bd	0.05	0.05	0.1	0.03	17.42
45D							bd	bd	0.1	0.3	0.3	0.01	bd	bd	0.8	0.05	0.1	0.02	35.11
48A	bd	bd	0.05	0.2	0.2	0.03							bd	bd	0.2	0.05	0.1	0.02	29.95
52B	bd	bd	0.05	0.1	0.1	0.02	bd	bd	0.05	0.2	0.2	0.01							22.10
58I	bd	bd	0.05	0.1	0.1	0.02	bd	bd	0.05	0.3	0.3	0.01	bd	bd	0.6	0.05	0.1	0.04	29.84
58J	bd	bd	0.05	0.1	0.1	0.02													26.01
59C	bd	bd	0.05	0.1	0.1	0.02	bd	bd	0.2	0.2	0.2	0.01	bd	bd	0.05	0.05	0.1	0.02	34.14
59D	bd	0.05	0.05	0.1	0.1	0.03	bd	0.09	0.2	0.2	0.2	0.02							45.13
64B	bd	bd	0.05	0.1	0.1	0.10	bd	0.19	0.05	0.3	0.3	0.12							24.56

64C							bd	0.05	0.05	0.5	0.5	0.11						38.24
64E	bd	bd	0.05	0.1	0.1	0.08												27.89
64F	bd	0.05	0.05	0.1	0.1	0.07												29.44
65C	bd	bd	0.05	0.1	0.1	0.07	bd	0.09	0.3	0.3	0.3	0.08						38.76
65E	bd	bd	0.05	0.1	0.1	0.07	bd	0.07	0.2	0.2	0.2	0.10	bd	bd	0.05	0.05	0.1	0.07	31.13
69D							bd	0.11	0.1	0.3	0.3	0.08						39.03
69E	bd	bd	0.05	0.1	0.1	0.10												28.15
71B	bd	bd	0.05	0.1	0.1	0.04	bd	0.12	0.1	0.2	0.2	0.06	bd	bd	0.05	0.05	0.1	0.07	46.14
72C	bd	bd	0.05	0.5	0.5	0.06	bd	0.06	0.2	0.3	0.3	0.09	bd	bd	0.6	0.05	0.1	0.13	36.96
72E	bd	bd	0.05	0.1	0.1	0.07	bd	0.08	0.05	0.5	0.5	0.08	bd	bd	0.1	0.05	0.1	0.13	28.76
74B	bd	bd	0.05	0.1	0.1	0.07	bd	0.06	0.05	0.6	0.6	0.08							41.15
74C							bd	0.07	0.3	0.7	0.7	0.11	bd	bd	0.3	0.05	0.1	0.08	33.91
82A							bd	0.05	0.05	0.8	0.8	0.04	bd	bd	0.7	0.05	0.1	0.04	44.52
83C	bd	bd	0.05	0.1	0.1	0.03	bd	0.11	0.1	0.7	0.7	0.02							37.84
89A	bd	bd	0.05	0.1	0.1	0.19	bd	bd	0.1	0.7	0.7	0.23							46.00
90A	bd	bd	0.05	0.6	0.6	0.04	bd	0.06	0.05	0.8	0.8	0.04	bd	bd	0.1	0.05	0.1	0.02	47.67
Median		**0.05**	**0.05**	**0.05**	**0.05**	**0.05**		**bd**	**0.10**	**0.30**	**0.30**	**0.06**		**bd**	**0.10**	**0.05**	**0.05**	**0.07**	**35.18**
Max		**0.07**	**0.05**	**0.60**	**0.60**	**0.20**		**0.19**	**0.80**	**0.80**	**0.80**	**0.23**		**0.20**	**0.80**	**0.20**	**0.20**	**0.24**	**48.6**

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

All nutrient concentrations shown in mg/L

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.

TSI = Trophic State Index, a quick indicator of canal health.
44 sites this quarter scored as GOOD (<60). zero sites scored FAIR (60-70), and zero scored POOR (>70).
Third quarter 2017 water quality continued to maintain despite the stormwater influence. However, many canals needed the water. July, August and with Hurricane Irma in September, significant rainfall fell on all of Southwest Florida. This much rain definitly gave new meaning to the "rainy season". The introduction of stormwater runoff has increased the amount of algae in the Canals; decreasing clarity. The lack of data in September (understandable due to Hurricane Irma) is attributed to the GOOD TSI readings.

The blackout period for fertilizer use ended on September 30th. Here are some tips to remember when using fertilizers on lawns or hiring a lawn care professional to apply fertilizers.

Fertilizer Ordinance

Ordinance No. 86 - 10

Fertilizer-Free Zones
No fertilizing within 10 feet of the top of a seawall or any water body (e.g., canals, lakes, wetlands, ponds)

Content of Fertilizer
Fertilizer must contain no less than 50% slow-release nitrogen. Fertilizer should be applied at the lowest rate, but no more than 4 lbs. of nitrogen per 1000 square foot shall be applied to any area in a calendar year.

Application Practices
Any fertilizer spread on an impervious surface must be immediately removed and contained. Fertilizer may not be swept, washed or blown off impervious surfaces into any water body.

Deflector shields must be used on spreaders and positioned so granules are deflected away from fertilizer free zones, impervious surfaces and water bodies.

No grass clippings, vegetative material or debris, either intentionally or accidentally may be swept or blown into storm water drains, ditches, water bodies, sidewalks, or roadways.

City of Cape Coral
Environmental Resources
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