Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 4th Quarter 2019

Environmental News

Cape Coral Burrowing Owl Festival

A record-breaking number of attendees enjoyed the 2020 Cape Coral Burrowing Owl Festival the last weekend of February. Over 4600 people attended Cape Coral's premier nature festival for its official city bird. The burrowing owl nesting season begins in February and ends mid-July. The Burrowing Owl Festival celebrates the start of the burrowing owl nesting season, but it also showcases many of Cape Coral's natural wonders and wildlife.
Festival attractions include local environmental and wildlife organizations with educational presentations on environmental and wildlife topics, including live animals displays, free tours of the Tom Allen butterfly house, free flora tours of the Rotary Park Environmental Center, nature bus tours around Cape Coral and (of course) burrowing owl information. The event also hosts numerous artists, photographers and craft vendors with natural themed items. The Burrowing Owl Festival is fun for the whole family. Next year's event will be held on February 27th, 2021.

Questions? Comments? Let us know!
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Native Plant profile

Nymphaea odorata
Fragrant Water Lily

The fragrant water lily, sometimes referred to as the American white water lily, when in bloom has large showy white flowers. Like other water lilies, the fragrant water lily blooms at sunrise, but then the flower closes before the heat of the day. Its fragrance perfumes the lakes, wetlands or when found in Cape Coral, freshwater canals, attracting numerous pollinators. Much of this plant's structures float on the surface of the water. Large round jagged leaves can be seen in clusters from a single plant. Its stems reaching down to the sediments below the surface.
The blooming period begins in spring and continues through the summer into fall. This attractive emergent aquatic can have uses in landscape ponds but is an eye-catching native that embellishes many Florida waterbodies.

Construction Site Runoff

Water quality can just as much be a result from people's activities, as it can be from natural cycles or nature out of balance. One specific issue that causes problems within Cape Coral's waterways is construction site runoff. Excess dirt or silt that enters the canal or lake associated with stormwater runoff can create a water quality problem that is more than just unattractive.

Once construction site runoff enters a waterbody it can decrease water clarity by making the water appear milky or dirty. Although most siltation events are temporary, it can be harmful to the biology and the chemistry of the canal.

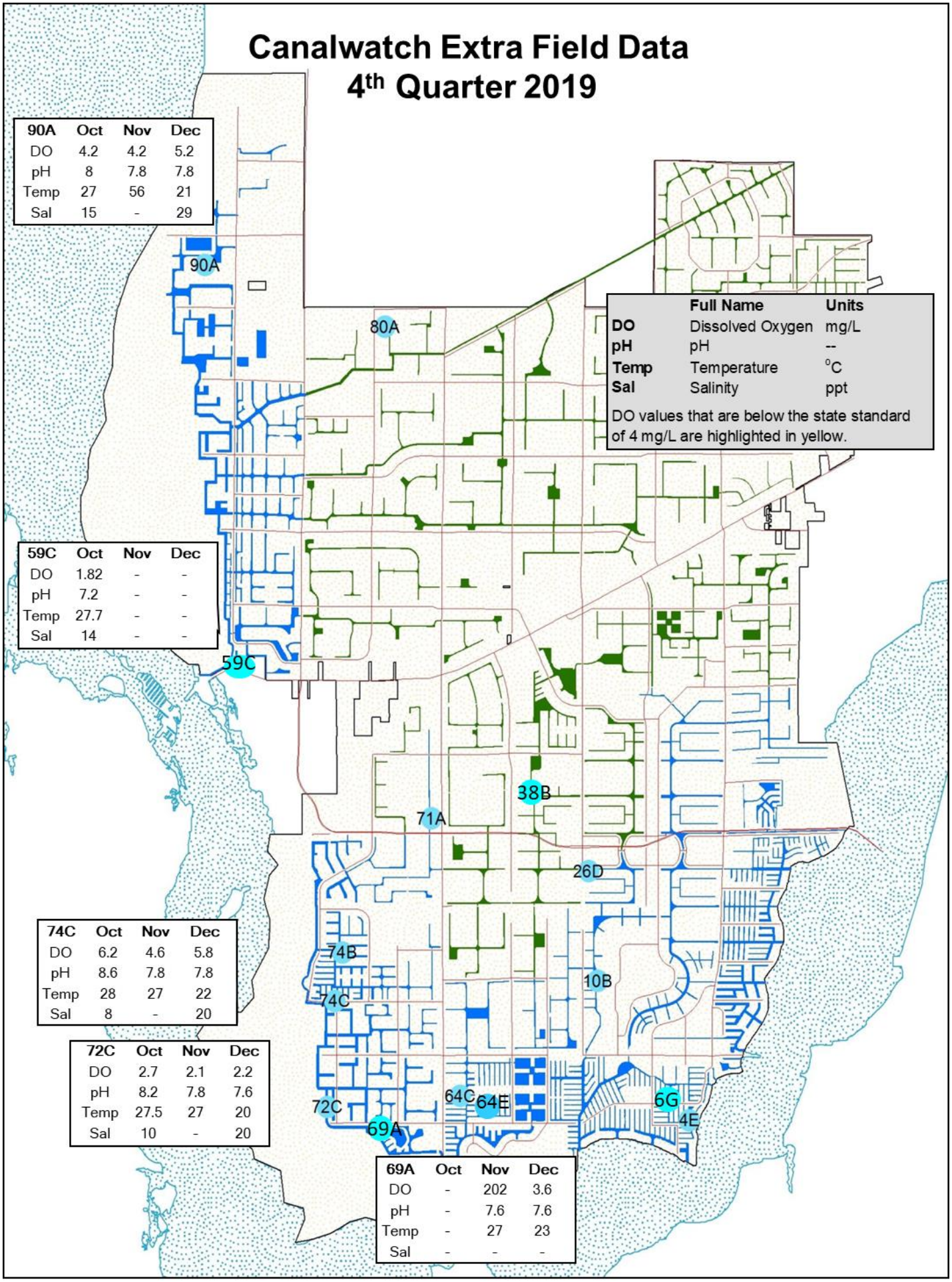
A short term decreased in available sunlight may not cause lasting harm to submerged aquatic vegetation, but the lack of sunlight can cause algae and phytoplankton to respire instead of photosynthesizing. Cell respiration uses oxygen which can decreased oxygen levels in the water. Low oxygen conditions (hypoxia) or no oxygen conditions (anoxia) can lead to fish kills or harm other aquatic or marine life. If the construction site runoff persists, the settling out of those dirt particles can create a layer of soil on top of plants that will eventually smother the plants.

Construction site runoff can directly harm fish and other gilled animals. Minute particles of silt, that create the same cloudy water condition, can clog gill structures and suffocate those that cannot avoid the area.
The continued issue of construction site runoff can lead to habitat destruction and would necessitate dredging of the area to remove the material from the waterbody. However, preventing these events from happening is the best, low cost option. Alerting the Cape Coral's 311 call center if canals appear milky, or if construction site material is not staying within the protective silt barriers can help resolve these issues. Stormwater inspectors can ensure those violations are corrected, before lasting harm results.

A failed silt and dirt barrier…

Can lead to this…

Canalwatch Extra Field Data
4th Quarter 2019



90A	Oct	Nov	Dec
DO	4.2	4.2	5.2
pH	8	7.8	7.8
Temp	27	56	21
Sal	15	-	29

	Full Name	Units
DO	Dissolved Oxygen	mg/L
pH	pH	--
Temp	Temperature	^{0}C
Sal	Salinity	ppt

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

59C	Oct	Nov	Dec
DO	1.82	-	-
pH	7.2	-	-
Temp	27.7	-	-
Sal	14	-	-

74C	Oct	Nov	Dec
DO	6.2	4.6	5.8
pH	8.6	7.8	7.8
Temp	28	27	22
Sal	8	-	20

72C	Oct	Nov	Dec
DO	2.7	2.1	2.2
pH	8.2	7.8	7.6
Temp	27.5	27	20
Sal	10	-	20

69A	Oct	Nov	Dec
DO	-	202	3.6
pH	-	7.6	7.6
Temp	-	27	23
Sal	-	-	-

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.													
	October 2019						November 2019						December 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
2B	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.10	0.1	0.4	0.4	0.10	0.05	0.05	0.1	0.2	0.2	0.10	38.32
3F							0.05	0.05	0.1	0.5	0.5	0.10	0.05	0.05	0.1	0.3	0.3	0.1	35.61
5D	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.05	0.1	0.4	0.4	0.10	0.05	0.05	0.1	0.1	0.1	0.1	33.3
6F	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.05	0.1	0.5	0.5	0.10	0.05	0.05	0.1	0.4	0.4	0.1	46.3
7E	0.05	0.05	0.05	0.8	0.8	0.05							0.05	0.05	0.1	0.3	0.3	0.1	41.46
9H	0.05	0.05	0.05	1	1.0	0.05	0.05	0.05	0.1	0.6	0.6	0.10	0.05	0.05	0.1	3.2	3.2	0.1	55.65
9I							0.05	0.05	0.1	0.5	0.5	0.10	0.05	0.05	0.1	0.2	0.2	0.1	36.14
11E	0.05	0.05	0.05	0.9	0.9	0.05	0.05	0.10	0.1	0.9	0.9	0.10	0.05	0.05	0.1	0.3	0.3	0.1	50.37
12H							0.05	0.05	0.1	0.6	0.6	0.05							43.17
13B													0.05	0.05	0.1	0.3	0.3	0.1	42.65
16E	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.05	0.1	0.8	0.8	0.05	0.05	0.05	0.2	0.5	0.5	0.1	65.16
16H													0.05	0.05	0.2	0.4	0.4	0.1	37.86
16I													0.05	0.05	0.1	3.8	3.8	0.1	54.36
18J							0.05	0.05	0.1	0.6	0.6	0.12	0.05	0.05	2.0	0.4	0.4	0.1	49.87
18K													0.05	0.05	0.1	0.8	0.8	0.1	43.59
18L	0.05	0.05	0.05	0.9	0.9	0.05	0.05	0.05	0.1	0.7	0.7	0.05	0.05	0.05	0.1	1.0	1.0	0.1	52.89
18M							0.05	0.05	0.1	0.7	0.7	0.13	0.05	0.05	0.1	0.5	0.5	0.1	50.91
19D	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.10	0.1	0.7	0.7	0.13	0.05	0.05	0.1	1.1	1.1	0.1	52.52
19K	0.05	0.05	3.2	0.9	0.9	0.05	0.05	0.05	0.1	0.7	0.7	0.11							48.94
21D	0.05	0.05	0.1	1.2	1.2	0.05	0.05	0.05	0.1	0.8	0.8	0.05	0.05	0.05	0.1	0.9	0.9	0.1	53.44
21I													0.05	0.05	0.1	0.7	0.7	0.1	51.65
24D	0.05	0.05	0.05	1.0	1.0	0.05	0.05	0.05	0.1	0.8	0.8	0.05	0.05	0.05	0.1	1.0	1.0	0.1	54.44
28D	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.10	0.1	1.0	1.0	0.05							39.07
30D													0.05	0.05	0.1	0.5	0.5	0.1	48.32
35B	0.05	0.05	0.05	0.9	0.9	0.05													55.57
41B	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.05	0.1	0.6	0.6	0.05	0.05	0.05	0.1	4.4	4.4	0.1	59.36
44A													0.05	0.05	0.1	0.6	0.6	0.1	50.12

45D							0.05	0.05	0.1	1.0	1.0	0.05							55.18
48A	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.05	0.1	0.7	0.7	0.05							51.98
58I	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.05	0.1	1.1	1.1	0.10	0.05	0.05	0.1	0.7	0.7	0.1	51.49
59C	0.05	0.05	0.05	0.6	0.6	0.05													50.6
64B	0.05	0.05	0.05	0.7	0.7	0.05													51.65
64H													0.05	0.05	0.1	0.2	0.2	0.1	32.6
65C	0.05	0.05	0.05	0.8	0.8	0.05													39.07
69A							0.05	0.05	0.1	0.8	0.8	0.14	0.05	0.05	0.4	1.3	1.3	0.2	55.98
71B	0.05	0.05	0.05	0.8	0.8	0.05													52.97
72C	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.05	0.3	1.8	1.8	0.10	0.05	0.05	0.1	0.7	0.7	0.1	58.56
74C	0.05	0.05	0.05	0.9	0.9	0.05	0.05	0.05	0.1	0.9	0.9	0.11	0.05	0.05	0.1	0.7	0.7	0.1	52.69
82A	0.05	0.05	0.05	0.9	0.9	0.05	0.05	0.05	0.1	1.1	1.1	0.05	0.05	0.05	0.1	3.5	3.5	0.1	54.76
89A	0.05	0.05	0.05	1.5	1.5	0.05	0.05	0.05	0.1	0.6	0.6	0.11	0.05	0.05	0.1	0.9	0.9	0.1	53.45
90A	0.05	0.05	0.05	0.7	0.7	0.05	0.05	0.05	0.1	0.7	0.7	0.05	0.05	0.05	0.1	0.4	0.4	0.1	49.45
96A	0.05	0.05	0.05	0.8	0.8	0.05	0.05	0.05	0.1	0.8	0.8	0.10	0.05	0.05	0.1	0.6	0.6	0.1	51.55
UP13A													0.05	0.05	0.1	0.5	0.5	0.1	51.99
Median		**bd**	**0.05**	**0.80**	**0.80**	**0.05**		**bd**	**0.05**	**0.70**	**0.70**	**0.10**		**bd**	**0.05**	**0.60**	**0.60**	**0.05**	**51.49**
Max		**0.05**	**3.20**	**1.50**	**1.50**	**0.05**		**0.10**	**0.30**	**1.80**	**1.80**	**0.14**		**0.05**	**2.00**	**4.40**	**4.40**	**0.17**	**65.16**

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. TSI = Trophic State Index, a quick indicator of canal health.
41 sites this quarter scored as GOOD (<60). one site scored FAIR (60-70), and zero scored POOR (>70).
Fourth quarter 2019 water quality ended good with the majority of the sites falling in the good category. With no major tropical storms for September and October and earlier than usual dryer conditions, water clarity within Cape Coral's canals and surrounding waterbodies became clearer well before the end of December.

Online Resources for Landscaping and Yard Maintenance

Florida Friendly Landscaping
Florida-Friendly Landscaping™ (FFL) combines methods with the use of low-maintenance plants and environmentally sustainable practices. Follow the link below for more information to beautify your home landscape that will save on time, money and is good for the environment.
https://ffl.ifas.ufl.edu/

Fertilize Smart
Local fertilizer ordinances and information on the proper use of lawn fertilizers.
http://fertilizesmart.com/

Bug Guide
Insect and pest bug identification for your home or garden.
https://bugguide.net/node/view/15740

The Farmers Almanac
Long standing guide for famers and home gardeners for weather predictions, planting guides, home and health topics and recipes. Follow the link below for an article regarding essential garden tools.
https://www.almanac.com/gardening-tools-101-which-tools-are-essential#

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