Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 3rd Quarter 2019

Environmental News

Construction Continues on the C-43 Reservoir

Construction for the Caloosahatchee River (C-43) West Basin Storage Reservoir Project for the Comprehensive Everglades Restoration Plan, (CERP) continues. Originally planned in 2008, the reservoir is located on 10,700 acres of former farmland west of Labelle in Hendry County. Once completed, it will operate by storing local runoff as well as Lake Okeechobee releases during the wet season, reducing lake discharges reaching the estuary. Additionally, it will help distribute flow to the Caloosahatchee River during the dry season, which provides needed flows for improved salinity balance.
The completion of the reservoir is anticipated to be completed by 2022.
The cost of the project is estimated at over $500 million. Funding for the project is provided by the South Florida Water Management District, Save Our Everglades Trust Fund, and a grant from the Land and Water Conservation Fund.
For more information, please visit;
https://www.sfwmd.gov/our-work/northern-everglades

Questions? Comments? Let us know!
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Native Plant profile

Agave americana
Century Plant

Century Plant is an evergreen lily-like plant with sharp tipped leaves; much like daggers. Despite the name this drought tolerant staple of desert regions in America produces a spectacular bloom stalk at maturity; usually at ten years or more, but certainly not a century. Once mature, it regularly blooms thereafter.
The century plant makes a great landscape accent plant among cactus or cycads in a Xeric area of the yard. It will also do well as a potted plant. This is also useful to keep those daggers away from people or pets.
Century plants grow wide. Expect up to 12 feet in diameter for well-established plants. I single flower stalk will yield yellow flowers when the conditions are right and will attract nectar loving insects and hummingbirds. Agave's perform best in full sun and well drained soils. *Agave americana* also has cultivars that are variegated.

Speices Profile:
Trichechus manatus
West Indian manatee

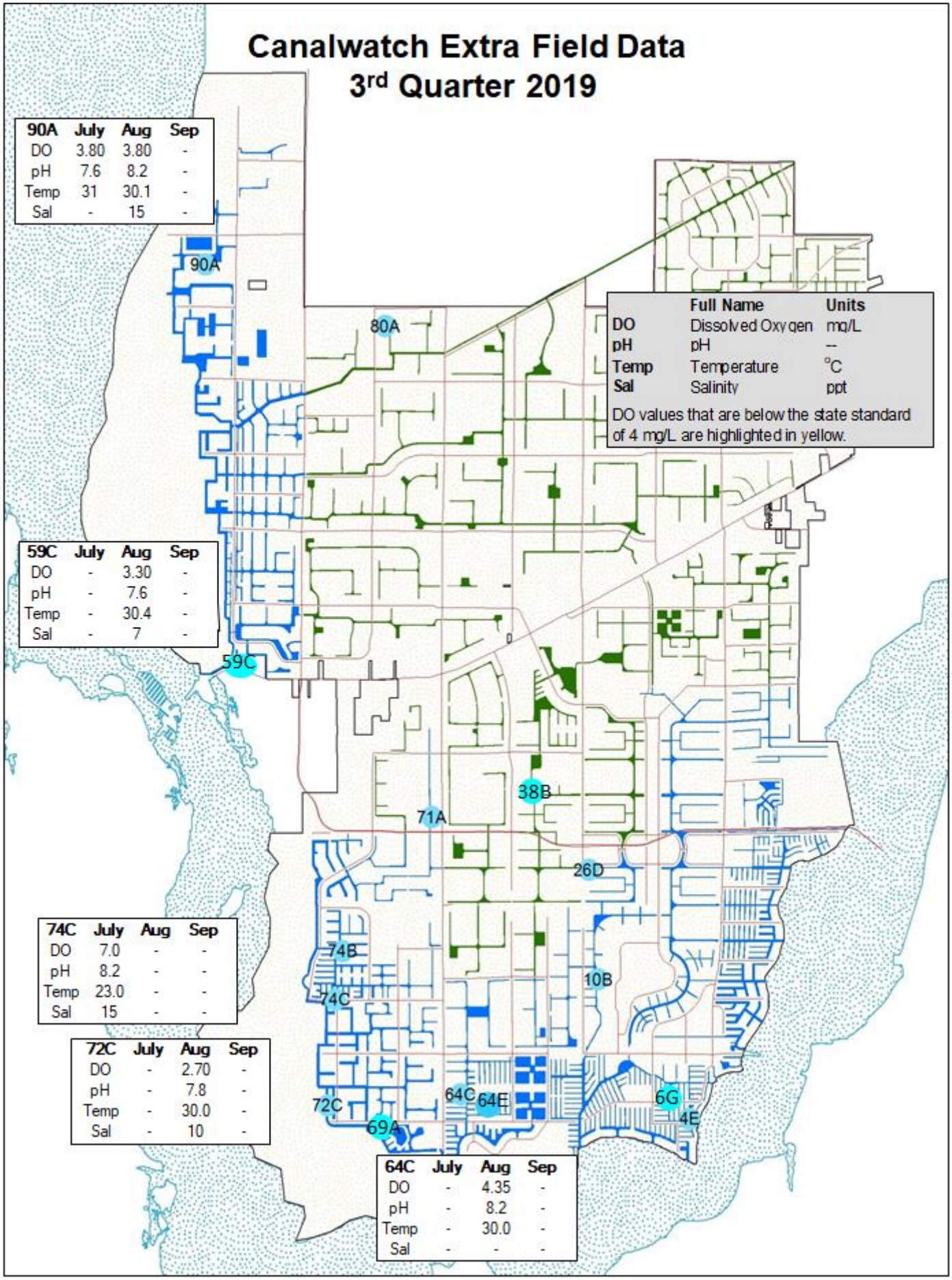
The West Indian manatee is a large, native aquatic mammal, found in waters throughout Florida including the saltwater canals of Cape Coral. Their diet includes seagrasses and other aquatic plants. As a model of conservation success, Florida manatee populations have grown to an estimated 7,520 animals. Because of these conservation efforts, in early 2017 the Florida manatee was reclassified from an endangered to a threatened species under the Federal Endangered Species Act.

A high number of manatee injuries and fatalities are from human-related causes. Most human-related manatee fatalities occur from collisions with watercraft. When boating on local waters, please obey all posted signs and slowdown in areas where you see manatees. Especially during the cooler winter months, when manatees may be moving through the Caloosahatchee River to seek refuge in warmer waters upstream. The occurrence of injured manatees has been reported locally.

If you see a manatee that appears injured please call Florida Fish and Wildlife Conservation's Wildlife Alert Hotline. 1-888-404-FWCC (1-888-404-3922), press "7" to speak with an operator, or just dial *FWC or #FWC on your cell phone.

If you are interested in supporting manatee research and rescue you can stop by any Florida Tax Collector's offices and purchase a manatee decal for $5. Decals are designed and created by the Florida Fish and Wildlife Conservation Commission.

Photo credit: Barb & Linda Zivney, manatee sighting during Canalwatch sampling


Canalwatch Extra Field Data
3rd Quarter 2019
90A July Aug Sep
DO 3.80 3.80 -
pH 7.6 8.2 -
Temp 31 30.1 -
Sal - 15 -
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.
59C July Aug Sep
DO - 3.30 -
pH - 7.6 -
Temp - 30.4 -
Sal - 7 -
59C
38B
71A
26D
74C July Aug Sep
DO 7.0 - -
pH 8.2 - -
Temp 23.0 - -
Sal 15 - -
74B
10B
74C
72C July Aug Sep
DO - 2.70 -
pH - 7.8 -
Temp - 30.0 -
Sal - 10 -
72C
64C
64E
6G
4E
69A
64C July Aug Sep
DO - 4.35 -
pH - 8.2 -
Temp - 30.0 -
Sal - - -

	bd = below detection				benchmark numbers: Marked data are in the highest 20% of values found by Hand et. al, 1988.													
	July 2019						August 2019						September 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	0.03	0.03	0.05	0.7	0.7	0.20													50.59
5D							0.03	0.03	0.05	1.0	1.0	0.05							39.08
6F	0.03	0.03	0.05	0.9	0.9	0.31	0.03	0.03	0.05	0.8	0.8	0.08							55.27
7E	0.03	0.03	0.05	0.8	0.8	0.27	0.025	0.15	0.05	0.9	0.9	0.09							22.67
9H	0.03	0.03	0.05	0.7	0.7	0.28	0.03	0.03	0.05	0.5	0.5	0.05							26.64
9I	0.03	0.03	0.05	0.8	0.8	0.30	0.03	0.03	0.05	0.8	0.8	0.06							34.83
11E	0.03	0.03	0.05	0.8	0.8	0.29	0.03	0.20	0.05	0.9	0.9	0.09							22.17
12H	0.03	0.03	0.05	0.8	0.8	0.36													10.59
16E	0.03	0.03	0.05	0.6	0.6	0.04	0.03	0.03	0.05	0.5	0.5	0.05							40.58
16H							0.03	0.03	0.05	0.4	0.4	0.05							37.59
18J							0.03	0.03	0.05	0.4	0.4	0.05							55.15
18K	0.03	0.03	0.05	0.7	0.7	0.06	0.03	0.03	0.05	0.6	0.6	0.05							52.32
18L	0.03	0.03	0.05	0.8	0.8	0.33	0.03	0.03	0.05	0.7	0.7	0.06							24.15
19D							0.03	0.30	0.05	0.9	0.9	0.09							30.60
19K	0.03	0.03	0.05	0.8	0.8	0.34	0.03	0.05	0.05	0.8	0.8	0.08							21.85
21D	0.03	0.03	0.05	0.8	0.8	0.28	0.03	0.03	0.05	0.5	0.5	0.05							54.28
24D							0.03	0.03	0.05	0.8	0.8	0.05							39.08
28D							0.03	0.06	0.05	0.8	0.8	0.05							39.08
35B							0.03	0.03	0.05	0.5	0.5	0.05							39.08
41B	0.03	0.03	0.05	0.5	0.5	0.07	0.03	0.03	0.05	0.7	0.7	0.05							46.57
45D	0.03	0.03	0.05	0.4	0.4	0.04	0.03	0.03	0.05	0.5	0.5	0.05							48.52
48A	0.03	0.03	0.05	0.7	0.7	0.04	0.03	0.03	0.05	0.6	0.6	0.05							34.24
58I	0.03	0.03	0.05	0.8	0.8	0.04	0.03	0.03	0.05	0.6	0.6	0.05							54.25

Due to the threat of Hurricane Dorian, sampleing for September was suspended.

59C							0.03	0.03	0.05	0.6	0.6	0.05						49.77
64C							0.03	0.10	0.05	0.8	0.8	0.06						36.44
65C	0.03	0.03	0.05	0.8	0.8	0.15	0.03	0.03	0.05	0.7	0.7	0.05						31.15
71B	0.03	0.03	0.05	0.9	0.9	0.1	0.03	0.03	0.05	0.7	0.7	0.05						57.82
72C							0.03	0.03	0.05	0.7	0.7	0.06						36.44
72E	0.03	0.03	0.05	0.8	0.8	0.13												25.29
74C	0.03	0.03	0.05	0.6	0.6	0.17												50.92
82A	0.03	0.03	0.05	1.1	1.1	0.05	0.03	0.03	0.05	0.8	0.8	0.05						59.89
89A	0.03	0.03	0.05	1.5	1.5	0.40	0.03	1.00	0.05	1.1	1.1	0.11						19.55
90A	0.03	0.03	0.05	0.7	0.7	0.06	0.03	0.03	0.05	1.1	1.1	0.05						59.54
96A	0.03	0.03	0.05	1.0	1.0	0.09	0.03	0.07	0.05	0.8	0.8	0.09						30.60
Median		**bd**	**0.05**	**0.80**	**0.80**	**0.16**		**bd**	**0.05**	**0.70**	**0.70**	**0.05**	**bd**	**#####**	**#####**	**#####**	**#####**	**39.08**
Max		**0.03**	**0.05**	**1.50**	**1.50**	**0.40**		**1.00**	**0.05**	**1.10**	**1.10**	**0.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**59.89**

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.
34 sites this quarter scored as GOOD (<60). zero sites scored FAIR (60-70), and zero scored POOR (>70).
Third quarter 2019 water quality developed into an average year as the wet season progressed. While some changes did occur in Cape Coral's canal waterways with a slight decrease in water clarity and lower saline conditions for tidally influenced canals, overall water quality remained healthy despite stormwater inflow. Some canals did experience filamentous algae and brown algae issues, but these occurrences were isolated and short in duration, and were not detrimental to the water quality conditions as a whole.

Some Useful Online Tools for Water Quality

Sanibel Captiva Conservation Foundation (SCCF)
River, Estuary and Coastal Observing Network (RECON) is a network of water quality sensors deployed throughout the Caloosahatchee River and Estuary. Information and real time data can be found here: http://recon.sccf.org/sites

NOAA National Centers for Coastal Ocean Science (NCCOS) Harmful Algal Bloom Monitoring System for Lake Okeechobee. Satellite imagery of Lake Okeechobee can be found here: https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/hab-monitoring-system/cyanobacteria-algal-bloom-satellite-lake-okeechobee-fl/

Florida Department of Environmental Protection (FDEP) Harmful Algal Bloom Dashboard. This interactive algal bloom dashboard provides publicly available data for the state's existing sampling sites regarding harmful algae detection.
https://fdep.maps.arcgis.com/apps/webappviewer/index.html?id=d62c3487e8de49f6b3a6559cdf059e14

University of South Florida's Water Atlas Presented by the Coastal and Heartland National Estuary Partnership. Provides a collection of water quality and other information for the Southwest coastal regions, including the entire Caloosahatchee River. https://chnep.wateratlas.usf.edu/

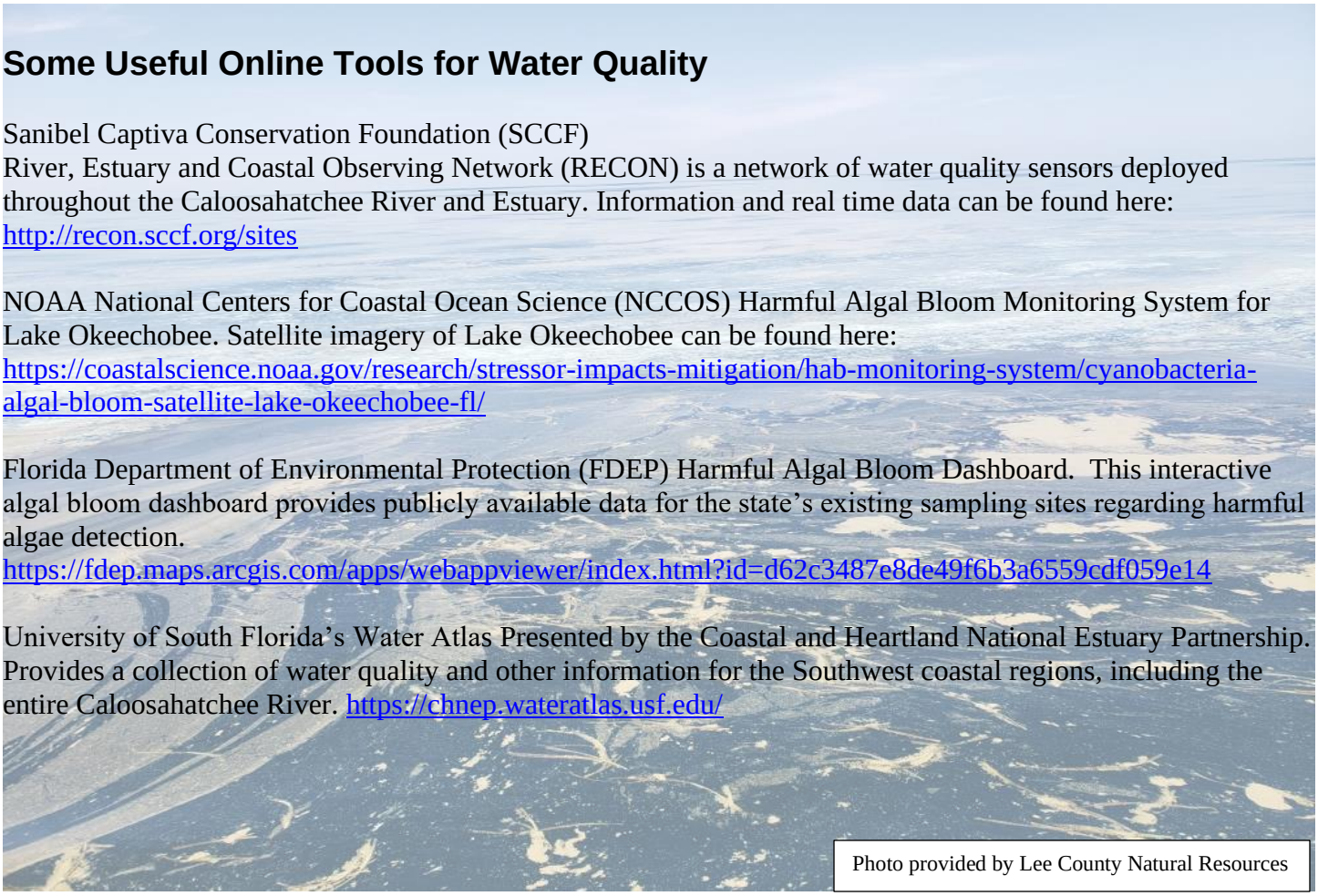


Photo provided by Lee County Natural Resources

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C/O Canalwatch Volunteer Program
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