Canal Current

A wave of information for Cape Coral's Canalwatch volunteers

Newsletter: 2nd Quarter 2013

Environmental News

Snook Season to Reopen

After many snook, a popular game fish, died due to the below average cold temperatures of the 2009 and 2010 winter that affected this area, the Florida Fish and Wildlife Conservation Commission (FWC), will reopen the season on September 1st, 2013.
Both the Gulf of Mexico snook fishery and the Atlantic snook fishery were closed in January of 2010. The snook season was reopened in the Atlantic waters, which includes Lake Okeechobee and the Kissimmee River in September of 2011, but remained closed for the Gulf snook fishery. The Atlantic snook fishery was less impacted by the cold weather that closed both fisheries. Scientist believe that both fisheries have made significant recoveries of this popular game fish since its closure.

*Snook season opens for the Gulf of Mexico September 1st and closes on December 1st 2013. Normal season to resume in 2014.

*Size limit is no less than 28 inches total length and no larger than 33 inches total length.

*Bag limit is one per day per person.

Inside This Issue:

Native Plants	1
Frog and Toad	2
Extra Field Data	3
Lab Data	4-5
Upcoming Events	6

Questions? Comments? Let us know!

(239)574-0785
Harry: hphillips@capecoral.net
Katie: kmcbride@capecoral.net

Native Plant profile

Fog Fruit
Phyla nodiflora

Sometimes referred to as matchstick flower or creeping Charlie, fog fruit is a native evergreen of the entire North American continent, but *Phyla nodiflora* (a more southern species) does not occur in the Pacific Northwest, the mid-west states bordering Canada or in the upper Northeast. This widely distributed plant is a popular nectar stop for butterflies and bees but can also provide a durable ground cover for well trodden areas.

The flower of fog fruit is made up of minute purple and white flowers around the head of a small bud. Each tiny flower provides nectar for a passing insect. This creeping vine like ground cover only reaches a height of about six inches, but can be mowed as grass if needed.

Propagation can occur through seeds or cuttings. However, be sure to have the rhizome or rootstock intact for planting.

Fog Fruit
Photo courtesy of Atlas of Florida Vascular Plants

Frog and Toad

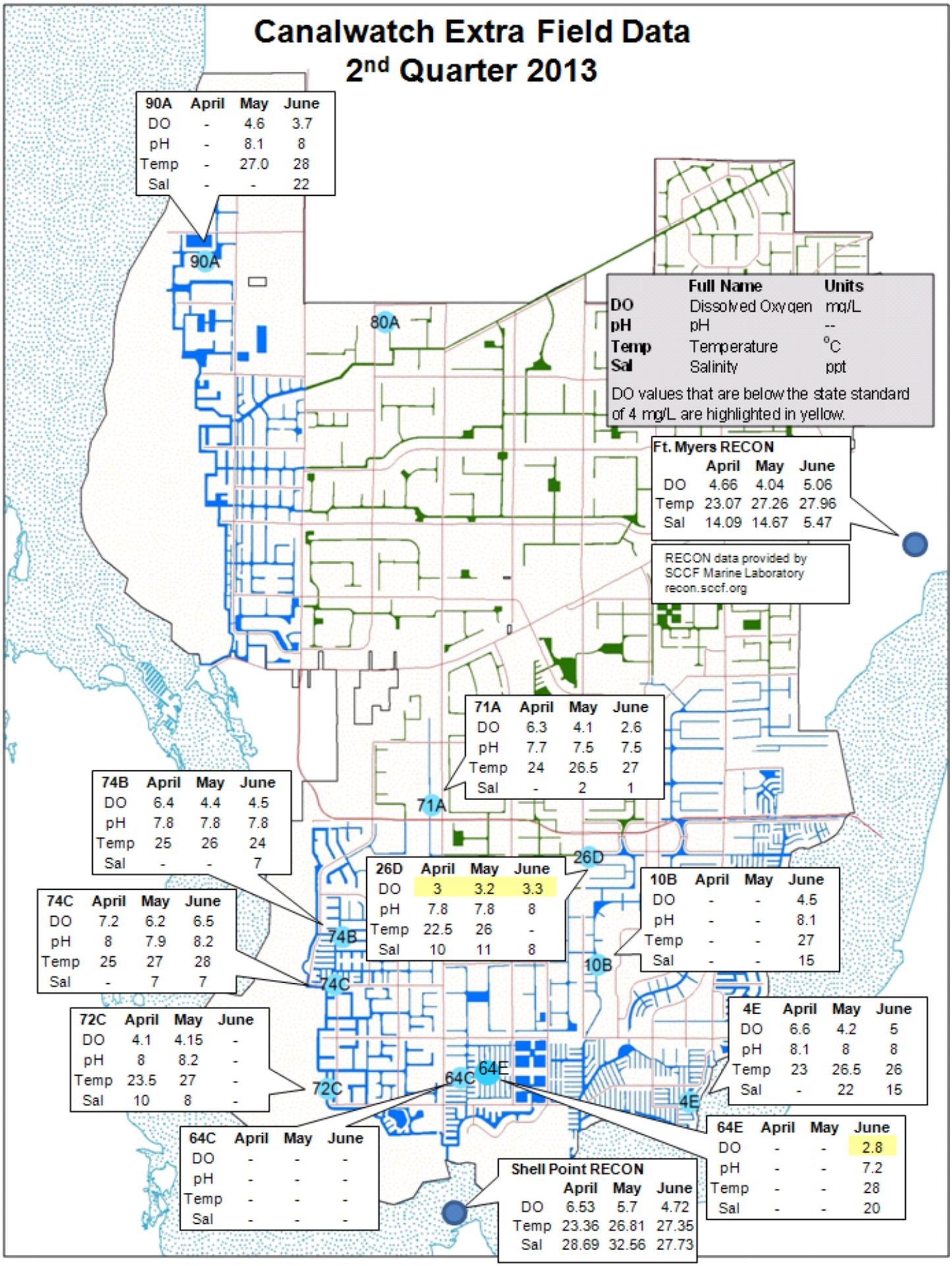
As summer ripens and rainfall occurrences assist in setting ones clock, so begins a familiar chorus from wooded areas, low lying fields and ditches across the area. The sound of multitudes of frogs and toads can drown out ones thoughts! Indeed a hallmark of summer, frogs and toads are an important element to the environment as well. Whether the calls are in those distant wooded areas, fields or even ones back yard, frogs and toads serve as an environmental indicator, devourer of insects, and an alternative "critter" for budding naturalist.

Not just another slimy thing that little boys keep in their lunchboxes, frogs and toads hold an important niche in any ecosystem and are also an indicator of health for the areas they inhabit. Frogs and toads eat any number of insects in and out of the water and are an important food source themselves for birds, snakes or other predators that enjoys cuisses de grenouille (that's French for frog legs).

Amphibians, such as frogs and toads require water in order to breed. Once the eggs are deposited in the pond, lake, ditch or canal, they develop into tadpoles. Tadpoles, pollywogs, froglets (or toadlets) – call them what you will, these are the free swimming juvenile stage of the adult and are very sensitive to pollution. Pesticides, weed killers or any number of other chemicals that can be washed into their habitat will sicken or kill these delicate animals. Growing arms and legs, losing the tail and learning how to breathe air doesn't guarantee safety from these dangers as the adults will need to return to the water to deposit eggs. Sick frogs equals sick birds, snakes or any predator that enjoys cuisses de grenouille. The ecosystem is broken.

Because frogs and toads have such an important standing in indicating health of an ecosystem, scientist and citizen scientist have been studying frogs and toads over many years. Frogwatch, a volunteer group that has been listening to frog and toad calls for over a decade, conducts surveys on the various frogs and toads all over North America, to indicate trends in population on many different species. Frogwatch has a local (Southwest Florida) chapter as well. More information can be found at www.aza.org/frogwatch or frogwatch.net. So, the next time a chirp, peep, or low trill is heard after a summer rain think not of our feathered friends, but of the green tree frog, spring peeper or narrow mouth toad, and perhaps some new friends will become familiar.

Canalwatch Extra Field Data
2nd Quarter 2013



90A	April	May	June
DO	-	4.6	3.7
pH	-	8.1	8
Temp	-	27.0	28
Sal	-	-	22

	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.

Ft. Myers RECON	April	May	June
DO	4.66	4.04	5.06
Temp	23.07	27.26	27.96
Sal	14.09	14.67	5.47

RECON data provided by SCCF Marine Laboratory recon.sccf.org

71A	April	May	June
DO	6.3	4.1	2.6
pH	7.7	7.5	7.5
Temp	24	26.5	27
Sal	-	2	1

74B	April	May	June
DO	6.4	4.4	4.5
pH	7.8	7.8	7.8
Temp	25	26	24
Sal	-	-	7

26D	April	May	June
DO	3	3.2	3.3
pH	7.8	7.8	8
Temp	22.5	26	-
Sal	10	11	8

10B	April	May	June
DO	-	-	4.5
pH	-	-	8.1
Temp	-	-	27
Sal	-	-	15

74C	April	May	June
DO	7.2	6.2	6.5
pH	8	7.9	8.2
Temp	25	27	28
Sal	-	7	7

72C	April	May	June
DO	4.1	4.15	-
pH	8	8.2	-
Temp	23.5	27	-
Sal	10	8	-

4E	April	May	June
DO	6.6	4.2	5
pH	8.1	8	8
Temp	23	26.5	26
Sal	-	22	15

64C	April	May	June
DO	-	-	-
pH	-	-	-
Temp	-	-	-
Sal	-	-	-

64E	April	May	June
DO	-	-	2.8
pH	-	-	7.2
Temp	-	-	28
Sal	-	-	20

Shell Point RECON	April	May	June
DO	6.53	5.7	4.72
Temp	23.36	26.81	27.35
Sal	28.69	32.56	27.73

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

	April 2013						May 2013						June 2013						
	NO2 <1.0	NO3 <1.0	NH3 none set	TKN	T-N <2.0	T-PO4 <0.46	NO2 <1.0	NO3 <1.0	NH3 none set	TKN	T-N <2.0	T-PO4 <0.46	NO2 <1.0	NO3 <1.0	NH3 none set	TKN	T-N <2.0	T-PO4 <0.46	Avg TSI
3F	bd	bd	bd	0.7	0.7	0.03	bd	bd	bd	0.6	0.6	0.04							47.05
4E	bd	bd	bd	1.0	1.0	0.04	bd	bd	0.1	0.8	0.8	0.05	bd	bd	0.1	1.1	1.1	0.07	53.66
6F	bd	bd	bd	0.9	0.9	0.04	bd	bd	bd	0.8	0.8	0.05	bd	bd	0.1	1.0	1.0	0.07	54.45
7C	bd	bd	bd	0.9	0.9	0.06	bd	bd	bd	0.8	0.8	0.05	bd	bd	bd	1.0	1.0	0.08	56.12
7D													bd	bd	bd	0.9	0.9	0.09	59.61
9E	bd	bd	bd	1.0	1.0	0.04	bd	bd	bd	1.0	1.0	0.05	bd	bd	bd	1.1	1.1	0.08	56.57
10B													bd	bd	0.1	0.9	0.9	0.05	54.14
11E	bd	bd	bd	0.9	0.9	0.06							bd	bd	bd	0.9	0.9	0.09	57.72
15D	bd	bd	bd	0.8	0.8	0.01	bd	bd	bd	0.8	0.8	0.04	bd	bd	bd	0.9	0.9	0.07	51.33
15E	bd	bd	bd	0.8	0.8	0.04							bd	bd	bd	0.9	0.9	0.07	54.08
16E	bd	bd	bd	0.8	0.8	0.03	bd	bd	bd	0.9	0.9	0.07	bd	bd	bd	0.9	0.9	0.03	56.36
19D	bd	bd	bd	1.0	1.0	0.06	bd	bd	0.1	1.0	1.0	0.07	bd	bd	bd	1.2	1.2	0.13	59.37
19K	bd	bd	bd	1.0	1.0	0.05	bd	bd	bd	1.2	1.2	0.11	bd	bd	bd	1.0	1.0	0.10	56.14
21D	bd	bd	bd	1.1	1.1	0.05	bd	bd	bd	0.8	0.8	0.07	bd	bd	bd	1.1	1.1	0.09	57.94
26D	bd	0.05	0.1	0.7	0.75	0.06	bd	bd	0.2	1.4	1.4	0.04	bd	bd	0.1	1.5	1.5	0.07	59.75
26F							bd	bd	bd	0.7	0.7	0.03							50.17
28D	bd	bd	bd	0.7	0.7	0.02	bd	bd	bd	0.8	0.8	0.03	bd	bd	bd	0.9	0.9	0.03	52.27
30C	bd	bd	bd	0.7	0.7	0.02	bd	bd	0.1	0.7	0.7	0.03	bd	bd	bd	0.9	0.9	0.05	47.98
35A	bd	bd	bd	0.6	0.6	0.03													45.37
35C							bd	bd	bd	0.9	0.9	0.03							44.86
41A	bd	bd	bd	0.6	0.6	0.01	bd	bd	bd	0.5	0.5	0.01	bd	bd	bd	0.5	0.5	0.02	29.55
45D	bd	bd	bd	0.5	0.5	0.02	bd	bd	bd	0.5	0.5	0.03							33.78
48A	bd	bd	bd	0.6	0.6	0.01	bd	bd	bd	0.5	0.5	0.01							33.02
52B	bd	bd	bd	0.7	0.7	0.01	bd	bd	bd	0.5	0.5	0.02	bd	bd	bd	0.6	0.6	0.02	35.28
58B	bd	bd	bd	1.0	1.0	0.03							bd	bd	bd	1.0	1.0	0.04	52.39
58F	bd	bd	bd	0.7	0.7	0.06	bd	bd	0.2	0.9	0.9	0.04	bd	bd	0.1	1.0	1.0	0.04	53.78
58G	bd	bd	bd	1.1	1.1	0.05	bd	bd	bd	0.8	0.8	0.04	bd	bd	0.1	0.8	0.8	0.04	52.64
58I	bd	bd	bd	0.7	0.7	0.05	bd	bd	0.1	0.8	0.8	0.04	bd	bd	0.1	0.9	0.9	0.05	48.49
59B	bd	bd	bd	0.5	0.5	0.02	bd	bd	0.2	0.8	0.8	0.03	bd	bd	0.1	0.8	0.8	0.04	45.47
60C							bd	bd	0.1	0.9	0.9	0.03	bd	bd	0.2	0.9	0.9	0.03	47.22

64B	bd	bd	bd	0.6	0.6	0.03	bd	bd	0.1	0.6	0.6	0.04							45.37
64E													bd	bd	0.2	0.8	0.8	0.07	56.10
65C	bd	bd	bd	0.6	0.6	0.03	bd	bd	bd	0.7	0.7	0.04	bd	bd	0.2	0.8	0.8	0.08	51.60
66A	bd	bd	bd	0.8	0.8	0.02							bd	bd	bd	1.0	1.0	0.02	37.32
69A	bd	bd	bd	1.0	1.0	0.08	bd	bd	bd	1.0	1.0	0.06							58.21
71A	bd	bd	bd	0.5	0.5	0.02	bd	bd	bd	0.4	0.4	0.03	bd	bd	bd	1.0	1.0	0.03	42.01
72A	bd	bd	bd	0.7	0.7	0.06	bd	bd	bd	0.6	0.6	0.06	bd	bd	bd	0.9	0.9	0.05	47.36
72C	bd	bd	bd	1.0	1.0	0.03	bd	bd	bd	1.2	1.2	0.04							50.11
74B	bd	bd	bd	0.8	0.8	0.04	bd	bd	bd	1.0	1.0	0.05	bd	bd	bd	1.1	1.1	0.06	54.44
74C	bd	bd	bd	1.0	1.0	0.05	bd	bd	bd	0.8	0.8	0.05	bd	bd	bd	1.0	1.0	0.06	53.20
74F	bd	bd	bd	0.8	0.8	0.04	bd	bd	bd	0.8	0.8	0.06	bd	bd	bd	1.0	1.0	0.07	55.52
81A													bd	bd	0.2	1.0	1.0	0.01	
81B	bd	bd	bd	0.8	0.8	0.04	bd	bd	0.1	0.8	0.8	0.04	bd	bd	0.2	1.1	1.1	0.04	51.95
82A	bd	bd	bd	0.9	0.9	0.03	bd	bd	0.2	0.9	0.9	0.03	bd	bd	0.2	1.0	1.0	0.04	53.40
83A	bd	bd	bd	1.0	1.0	0.03							bd	bd	0.2	1.0	1.0	0.04	56.57
83B							bd	bd	0.1	1.0	1.0	0.03	bd	bd	0.2	1.1	1.1	0.15	54.60
89A	bd	bd	bd	1.1	1.1	0.07	bd	bd	bd	1.0	1.0	0.08	bd	bd	0.1	1.4	1.4	0.04	60.60
89B													bd	bd	bd	1.3	1.3	0.14	64.18
90A	bd	bd	bd	1.6	1.6	0.03	bd	bd	0.1	1.2	1.2	0.03	bd	bd	0.2	1.6	1.6	0.04	50.17
91A							bd	bd	bd	0.6	0.6	0.02	bd	bd	bd	0.6	0.6	0.02	41.60
97A							bd	bd	bd	0.4	0.4	0.01	bd	bd	bd	0.5	0.5	0.01	24.43
Median		**0.05**	**0.10**	**0.80**	**0.80**	**0.04**		**bd**	**0.10**	**0.80**	**0.80**	**0.04**		**bd**	**0.15**	**1.00**	**1.00**	**0.05**	**52.52**
Max		**0.05**	**0.10**	**1.60**	**1.60**	**0.08**		**0.00**	**0.20**	**1.40**	**1.40**	**0.11**		**0.00**	**0.20**	**1.60**	**1.60**	**0.15**	**64.18**

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. 47 sites this quarter scored as GOOD (<60). 2 sites scored FAIR (60-70), zero scored POOR (>70) and one had insufficient data to report.

Rainfall has been prevalent this quarter. But despite the increased freshwater inflows the canals have remained relatively healthy. There has been some instances of duck weed (*Spirodela polyrhiza*) in the canals along the Caloosahatchee River. This occurrence is common this time of year and will dissipate come fall. This rainy season has been a soaker so far and there are still a few months to go!

August

7th Canalwatch

7th Organic Gardening
9 am-10 am
Rotary Park
Info: 549-4606

10th Gardening for Butterflies
10:30am – 12:30pm
Rotary Park
Info: 549-4606

12th Florida's Reptiles: Turtles
A free seminar from 1pm-2pm
Rotary Park
Info: 549-4606

September

2nd Labor Day

4th Canalwatch

20th Full moon paddle and
Night hike at ECO Preserve
7pm-9pm
Info: 549-4606

29th Guided Paddle of
Matlacha Pass
9am-11am
Info: 549-4606

October

2nd Canalwatch

5th Florida Friendly Yard
Tours
9am-noon
Info: 549-4606

12th Nature of Cape Coral
Bus Tour
8am-noon
Info: 549-4606

18th Full moon paddle and
Night hike at ECO Preserve
7pm-9pm
Info: 549-4606

21st Florida's Reptiles: Lizards
A free seminar from 1pm-2pm
Rotary Park
Info: 549-4606

City of Cape Coral
Environmental Resources
P.O. BOX 150027
Cape Coral, FL 33915-0027