# Canal Current

**A wave of information for Cape Coral's Canalwatch volunteers**

Newsletter: 4th Quarter 2013

## Environmental News

### Calling All Citizen Scientists

The City of Cape Coral is a home and stopover site for many diverse species of birds. We are fortunate to have a mix of coastal, upland, and migratory birds here at various times of the year. The Cape Coral Citizen Science Bird Walk (CSBW) capitalizes on that good fortune by teaming up City biologists with residents to survey and identify birds at parks and green areas of the city. Walking or paddling surveys take place in the morning on the second Friday of each month. Some of the previous survey areas have been Rotary Park, Four Mile Cove Eco Park, and Yellow Fever Creek. Birds sighted during the surveys include wood storks, cedar waxwings, and gebes. Data is recorded and entered into eBird.

The next survey will be at the newly renovated Sirenia Vista Park on the corner of Ceitus Parkway and Old Burnt Store Road on Friday, February 14th at 8 a.m. This will be a paddling trip, so you will need to bring your own kayak or canoe. Please contact Katie McBride at kmcbride@capecoral.net or Honey Archey at harchey@capecoral.net or stop by Rotary Park for more information. New Citizen Scientists are always welcome!

## Native Plant profile

### Cypress Tree
***Taxodium spp.***

Cypress trees are often the hallmark of swamps and wetlands throughout the south. Indeed these conifer trees are well adapted to low lying, and frequently wet areas of the landscape. Some of these adaptations are present in their root structures. Cypress knees; the tapered pillars that arise from around the base of each tree are there to breech the surface of the water and bring oxygen to the submerged portions of the tree.

Cypress trees are conifers, meaning that they produce cones instead of fleshy fruit. They are also deciduous. During the fall, the needles of these trees turn a reddish brown before the tree denudes for the winter months. The arrival of longer days and warmer weather in the spring brings these trees back to vibrant emerald colors.

While the cypress tree is the sentinel of the swamp, it does have its uses in landscape. This highly adaptable tree has found success even in slightly dryer soils, providing there is room for its 70 foot height, lofty canopy and of course – cypress knees.


## Inside This Issue:



**Questions? Comments? Let us know!**

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## No Dumping! Only Let Rain Go Down the Drain

Even as the dry season grips the area, there are still potential sources of pollutants that can infiltrate our canal waterways. Non-point source pollution comes in many forms: too many nutrients, sediment, automobile debris (oil, tire rubber, brake dust), and of course the very visual form of pollution - trash. With these, there is a likely supply of contaminants that can make their way into the sewer system when rains become part of the forecast. However, some pollution finds its way into the stormwater sewer system illegally - either intentionally or unintentionally.

Illicit discharges are pollutants such as the aforementioned, which enter the municipal stormwater sewer system illegally. Illegal dumping of chemicals, horticultural waste, detergents from auto or boat washing, even silt or sand from construction sites that enter the sewer system, are all considered illicit discharges. The list can be endless; and, while some may be considered unintentional, all are unlawful. Most municipalities that have a separate stormwater sewer system (a system that leads to natural waters, such as rivers, lakes and bays) adopt the motto "Only Let Rain Go Down the Drain" as a means to let residents and business owners throughout the community know that protection of these aquatic or marine habitats should be a priority.


Cape Coral's "liquid assets" are its canals and lakes. These man-made waterways are considered a unique attribute to the city's stormwater flood control and irrigation supply. But they also have natural aesthetics, and recreational use possibilities. In an effort to curb knowing or unknowing individuals from letting substances other than rain enter the stormwater system, the Environmental Resources Division is marking catch basins (stormwater inlets that lead to canals and lakes) with signage to discourage illicit discharges. "**Dump No Waste: Protect Your Water**" markers will be placed on many catch basins throughout the city. Most will be in high pedestrian traffic areas (city parks, boat ramps and the downtown area) to bring about awareness of protecting our waterways.

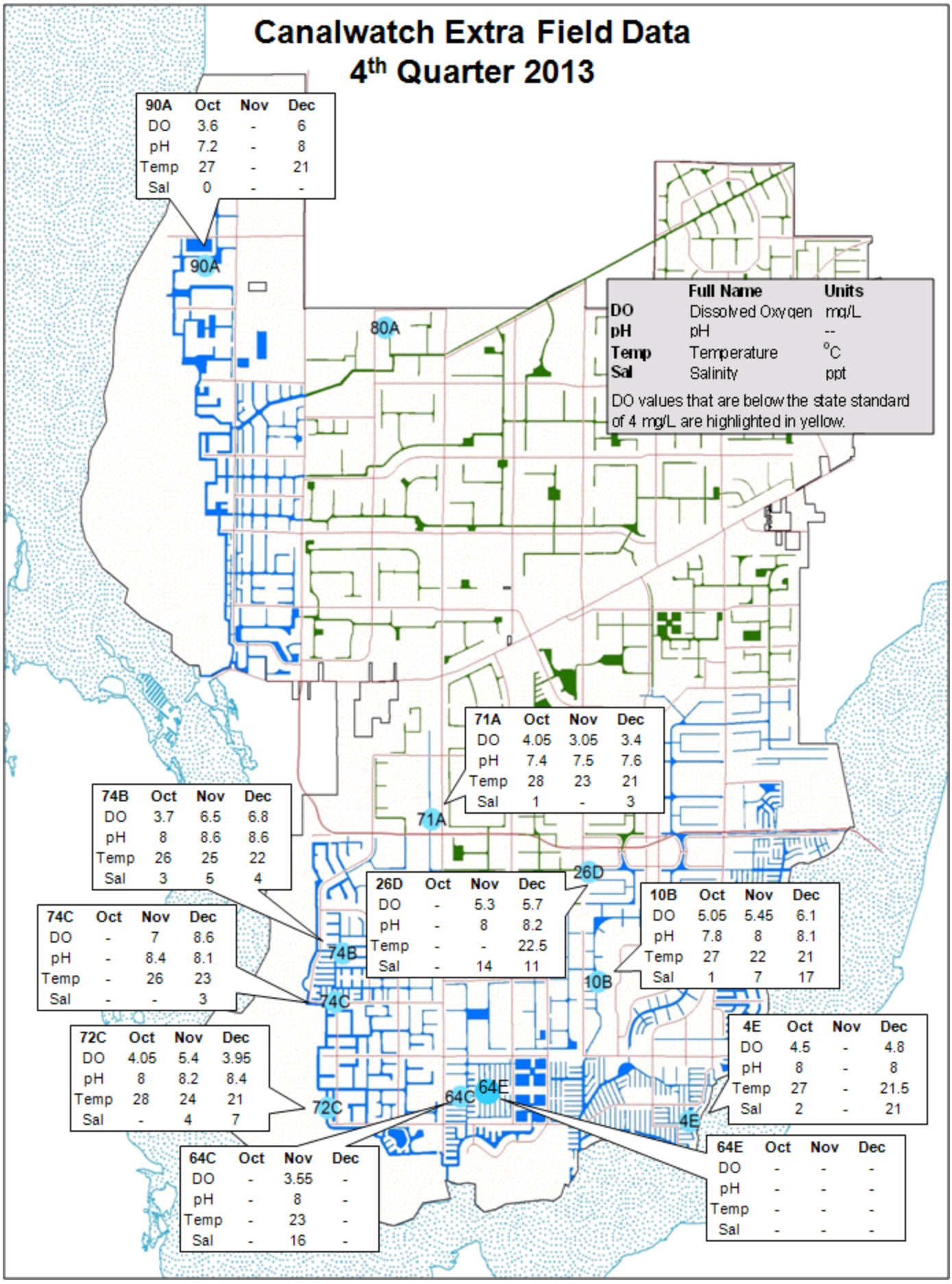
You can help as well.

- Please keep debris away from stormwater catch basins to prevent it from entering natural waterways.
- Blow or sweep grass clippings into grassy areas, not down storm drains or into canals.
- Never dump anything down a stormwater catch basin.
- **Only Let Rain Go Down the Drain!**


Please report any illicit discharges to Cape Coral Action Center at 574-0425.

If additional information is needed, e.g. dewatering pools, household hazardous waste drop off locations, or having trash removed from the city's canal waterways, you may contact the above number or call the Cape Coral Environmental Resources Division at 574-0785.

# Canalwatch Extra Field Data
# 4th Quarter 2013




| 90A | Oct | Nov | Dec |
|---|---|---|---|
| DO | 3.6 | - | 6 |
| pH | 7.2 | - | 8 |
| Temp | 27 | - | 21 |
| Sal | 0 | - | - |

| | 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.

| 71A | Oct | Nov | Dec |
|---|---|---|---|
| DO | 4.05 | 3.05 | 3.4 |
| pH | 7.4 | 7.5 | 7.6 |
| Temp | 28 | 23 | 21 |
| Sal | 1 | - | 3 |

| 74B | Oct | Nov | Dec |
|---|---|---|---|
| DO | 3.7 | 6.5 | 6.8 |
| pH | 8 | 8.6 | 8.6 |
| Temp | 26 | 25 | 22 |
| Sal | 3 | 5 | 4 |

| 26D | Oct | Nov | Dec |
|---|---|---|---|
| DO | - | 5.3 | 5.7 |
| pH | - | 8 | 8.2 |
| Temp | - | - | 22.5 |
| Sal | - | 14 | 11 |

| 10B | Oct | Nov | Dec |
|---|---|---|---|
| DO | 5.05 | 5.45 | 6.1 |
| pH | 7.8 | 8 | 8.1 |
| Temp | 27 | 22 | 21 |
| Sal | 1 | 7 | 17 |

| 74C | Oct | Nov | Dec |
|---|---|---|---|
| DO | - | 7 | 8.6 |
| pH | - | 8.4 | 8.1 |
| Temp | - | 26 | 23 |
| Sal | - | - | 3 |

| 4E | Oct | Nov | Dec |
|---|---|---|---|
| DO | 4.5 | - | 4.8 |
| pH | 8 | - | 8 |
| Temp | 27 | - | 21.5 |
| Sal | 2 | - | 21 |

| 72C | Oct | Nov | Dec |
|---|---|---|---|
| DO | 4.05 | 5.4 | 3.95 |
| pH | 8 | 8.2 | 8.4 |
| Temp | 28 | 24 | 21 |
| Sal | - | 4 | 7 |

| 64C | Oct | Nov | Dec |
|---|---|---|---|
| DO | - | 3.55 | - |
| pH | - | 8 | - |
| Temp | - | 23 | - |
| Sal | - | 16 | - |

| 64E | Oct | Nov | Dec |
|---|---|---|---|
| DO | - | - | - |
| pH | - | - | - |
| Temp | - | - | - |
| Sal | - | - | - |

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

| | October 2013 | | | | | | November 2013 | | | | | | December 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 | 0.00 | 0 | 0.4 | 0.4 | 0.06 | | | | | | | bd | 0.06 | 0.1 | 0.9 | 0.96 | 0.04 | 51.48 |
| 4E | bd | 0.09 | 0 | 1.0 | 1.09 | 0.10 | | | | | | | bd | 0.05 | 0.1 | 1.1 | 1.15 | 0.04 | 61.27 |
| 6F | bd | bd | 0 | 1.2 | 1.2 | 0.13 | bd | bd | bd | 1.2 | 1.2 | 0.07 | bd | bd | 0.05 | 0.9 | 0.9 | 0.05 | 56.47 |
| 7D | bd | 0.09 | 0 | 1.1 | 1.19 | 0.12 | bd | bd | bd | 1.0 | 1.0 | 0.11 | | | | | | | 59.53 |
| 9E | bd | bd | 0 | 1.1 | 1.1 | 0.08 | bd | bd | bd | 0.7 | 0.7 | 0.04 | bd | 0.06 | 0.05 | 0.9 | 0.96 | 0.09 | 59.61 |
| 10B | bd | 0.00 | 0 | 0.5 | 0.5 | 0.06 | bd | bd | bd | 0.7 | 0.7 | 0.04 | bd | bd | 0.1 | 0.8 | 0.8 | 0.04 | 47.66 |
| 11E | bd | 0.18 | 0 | 0 | 0.18 | 0.14 | bd | bd | bd | 1.2 | 1.2 | 0.06 | bd | 0.06 | 0.1 | 1.0 | 1.06 | 0.06 | 50.62 |
| 15D | bd | 0.06 | 0 | 0.5 | 0.56 | 0.08 | bd | bd | bd | 1.0 | 1.0 | 0.07 | bd | bd | 0.05 | 0.7 | 0.7 | 0.03 | 49.94 |
| 15E | bd | 0.06 | 0 | 0.5 | 0.56 | 0.07 | bd | bd | bd | 1.1 | 1.1 | 0.07 | bd | bd | 0.05 | 0.6 | 0.6 | 0.03 | 53.41 |
| 16E | bd | bd | 0 | 0.6 | 0.6 | 0.08 | bd | bd | bd | 0.9 | 0.9 | 0.06 | bd | bd | 0.05 | 0.5 | 0.5 | 0.03 | 59.63 |
| 19D | bd | 0.09 | 0 | 1.5 | 1.59 | 0.14 | bd | bd | bd | 1.5 | 1.5 | 0.07 | bd | bd | 0.05 | 0.9 | 0.9 | 0.07 | 67.70 |
| 19K | bd | bd | 0 | 1.7 | 1.7 | 0.13 | bd | bd | bd | 1.2 | 1.2 | 0.08 | | | | 1.2 | 1.2 | 0.07 | 61.96 |
| 21D | bd | 0.08 | 0 | 0.6 | 0.68 | 0.05 | bd | bd | bd | 1.0 | 1.0 | 0.07 | bd | 0.05 | 0.05 | 1.1 | 1.15 | 0.06 | 58.63 |
| 26D | | | | | | | bd | bd | bd | 1.1 | 1.1 | 0.08 | bd | bd | 0.05 | 1.5 | 1.5 | 0.04 | 58.17 |
| 26F | | | | | | | | | | | | | bd | bd | 0.05 | 1.0 | 1.0 | 0.03 | 49.46 |
| 28D | bd | 0.08 | 0 | 0.6 | 0.68 | 0.03 | bd | bd | bd | 0.3 | 0.3 | 0.03 | bd | bd | 0.05 | 0.5 | 0.5 | 0.03 | 51.85 |
| 30C | bd | bd | 0 | 0.5 | 0.5 | 0.03 | bd | bd | bd | 0.7 | 0.7 | 0.04 | bd | bd | 0.05 | 1.0 | 1.0 | 0.08 | 54.06 |
| 41A | | | | | | | bd | bd | bd | 0.6 | 0.6 | 0.02 | bd | 0.11 | 0.05 | 0.3 | 0.41 | 0.01 | 24.43 |
| 45D | bd | bd | 0 | 0.4 | 0.4 | 0.03 | bd | bd | bd | 1.0 | 1.0 | 0.03 | bd | bd | 0.05 | 0.3 | 0.3 | 0.01 | 54.82 |
| 47A | | | | | | | bd | bd | bd | 0.8 | 0.8 | 0.02 | | | | | | | 50.00 |
| 48A | bd | bd | 0 | 0.3 | 0.3 | 0.02 | bd | 0.07 | bd | 0.9 | 0.97 | 0.03 | bd | 0.09 | 0.1 | 0.5 | 0.59 | 0.01 | 31.51 |
| 58B | bd | bd | 0 | 1.0 | 1.0 | 0.05 | | | | | | | | | | | | | 54.70 |
| 58F | bd | 0.10 | 0 | 0.7 | 0.80 | 0.04 | bd | bd | bd | 1.5 | 1.5 | 0.06 | bd | bd | 0.05 | 2.5 | 2.5 | 0.13 | 62.53 |
| 58G | bd | 0.07 | 0 | 0.8 | 0.87 | 0.03 | bd | bd | bd | 0.7 | 0.7 | 0.04 | bd | bd | 0.05 | 1.8 | 1.8 | 0.14 | 54.50 |
| 58I | bd | bd | 0 | 0.7 | 0.7 | 0.03 | bd | bd | bd | 1.0 | 1.0 | 0.09 | bd | bd | 0.05 | 1.9 | 1.9 | 0.16 | 56.33 |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **59B** | bd | bd | 0 | 0.6 | 0.6 | 0.02 | | | | | | | bd | bd | 0.05 | 1.3 | 1.3 | 0.05 | 48.23 |
| **60C** | bd | 0.00 | 0 | 0.4 | 0.4 | 0.02 | bd | bd | bd | 0.6 | 0.6 | 0.02 | bd | bd | 0.3 | 1.2 | 1.2 | 0.06 | 43.99 |
| **64B** | bd | 0.11 | 0 | 0.6 | 0.71 | 0.10 | bd | bd | bd | 1.1 | 1.15 | 0.07 | bd | bd | 0.05 | 0.7 | 0.7 | 0.05 | 48.09 |
| **64C** | | | | | | | bd | 0.09 | bd | 1.1 | 1.19 | 0.07 | | | | | | | 51.17 |
| **65C** | bd | 0.00 | 0 | 0.7 | 0.7 | 0.10 | bd | 0.06 | bd | 1.4 | 1.46 | 0.08 | | | | | | | 62.59 |
| **66A** | bd | bd | 0 | 0.6 | 0.6 | 0.02 | bd | bd | bd | 0.6 | 0.6 | 0.02 | | | | | | | 47.75 |
| **69A** | | | | | | | bd | bd | bd | 1.2 | 1.2 | 0.09 | bd | bd | 0.05 | 1.0 | 1.0 | 0.09 | 59.77 |
| **71A** | bd | 0.17 | 0 | 0.8 | 0.97 | 0.14 | bd | bd | bd | 0.4 | 0.4 | 0.03 | bd | 0.11 | 0.05 | 0.7 | 0.81 | 0.02 | 39.34 |
| **72A** | bd | 0.00 | 0 | 0.7 | 0.7 | 0.09 | bd | bd | bd | 0.4 | 0.4 | 0.07 | | | | | | | 45.89 |
| **72C** | bd | 0.00 | 0 | 0.7 | 0.7 | 0.08 | bd | bd | bd | 0.6 | 0.6 | 0.06 | bd | bd | 0.05 | 1.0 | 1.0 | 0.06 | 56.18 |
| **72D** | bd | 0.00 | 0 | 0.4 | 0.4 | 0.11 | | | | | | | bd | bd | 0.05 | 1.0 | 1.0 | 0.07 | 51.92 |
| **74B** | bd | 0.00 | 0 | 0.9 | 0.9 | 0.08 | bd | bd | bd | 1.5 | 1.5 | 0.09 | bd | bd | 0.05 | 0.6 | 0.6 | 0.06 | 59.65 |
| **74C** | | | | | | | bd | bd | bd | 0.7 | 0.7 | 0.07 | bd | bd | 0.05 | 0.7 | 0.7 | 0.05 | 52.59 |
| **74F** | bd | 0.00 | 0 | 0.5 | 0.5 | 0.10 | bd | bd | bd | 0.5 | 0.5 | bd | | | | | | | 52.91 |
| **81B** | bd | bd | 0 | 0.4 | 0.4 | 0.03 | bd | bd | bd | 0.6 | 0.6 | 0.03 | | | | | | | 44.32 |
| **82A** | bd | bd | 0.05 | 0.7 | 0.7 | 0.02 | bd | bd | bd | 0.5 | 0.5 | 0.04 | bd | bd | 0.05 | 1.1 | 1.1 | 0.03 | 52.71 |
| **83A** | bd | 0.00 | 0 | 0.6 | 0.6 | 0.03 | bd | bd | bd | 0.7 | 0.7 | 0.03 | bd | bd | 0.2 | 1.1 | 1.1 | 0.02 | 47.94 |
| **83B** | bd | 0.00 | 0 | 0.6 | 0.6 | 0.03 | | | | | | | | | | | | | 52.26 |
| **89A** | bd | 0.00 | 0 | 0.7 | 0.7 | 0.15 | bd | bd | bd | 0.8 | 0.8 | 0.09 | bd | bd | 0.05 | 1.0 | 1.0 | 0.06 | 60.48 |
| **90A** | bd | bd | 0.05 | 1.3 | 1.3 | 0.02 | bd | bd | bd | 1.4 | 1.4 | 0.04 | bd | bd | 0.1 | 1.6 | 1.6 | 0.02 | 51.11 |
| **Median** | | **0.03** | **0.00** | **0.60** | **0.69** | **0.07** | | **bd** | **bd** | **0.90** | **0.94** | **0.06** | | **bd** | **0.05** | **1.00** | **1.00** | **0.05** | **52.71** |
| **Max** | | **0.18** | **0.05** | **1.70** | **1.70** | **0.15** | | **0.09** | **0.00** | **1.50** | **1.50** | **0.11** | | **0.11** | **0.30** | **2.50** | **2.50** | **0.16** | **67.7** |

| | |
|---|---|
| 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. 38 sites this quarter scored as GOOD (<60). 6 sites scored FAIR (60-70), zero scored POOR (>70).
Winter time, and cooler and dryer weather has made for some beautiful days. The canals have remained relatively healthy. In fact the wind driven waves mix water, cooler water temperatures hold more disolved oxygen and little stormwater runoff lessens the nutrient inflow.

## February

5th Canalwatch

3rd Florida's Reptiles: Snakes
A free seminar from 1pm-2pm
Rotary Park

7th Guided Paddle of Four Mile Eco Preserve or Matlacha Pass
Both 9 am-11 am
Info: 549-4606

8th Nature of Cape Bus Tour
8am – 1pm
Meets at Rotary Park
Info: 549-4606

22nd Burrowing Owl Festival
Rotary Park from 10-4

## March

5th Canalwatch

5th Florida Environment 101 Seminar
Rotary Park 1pm-3pm
Info: 549-4606

15th Florida Yards & Neighborhoods Yard Tours
9am – 12pm
Info: 549-4606

## April

2th Canalwatch
(Annual BBQ at the Yacht Club)

4th Guided Tour of Yellow Fever Creek
9am-11am
Info: 549-4606

**Reminder: The 14th Annual Canalwatch Volunteer Appreciation BBQ is on April 2nd. Please RSVP at 574-0785**

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City of Cape Coral
Environmental Resources
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