July 2013

Photo Contest

We are holding a photo contest to decide the permanent header for the VWM E-Newsletter! Send your submissions to waterquality@galvbay.org

UPCOMING EVENTS

Ladies Casting for Conservation
July 27, 2013

Wildlife Workday: Storm Drain Markers on the Strand
August 17, 2013

Calling All Water Monitors!

Are you itching to test for more than the Core Parameters you learned in Phases I, II, and III? Then this is your chance! The next Volunteer Bacteria Sampler Certification class will be held in August. At this training session volunteers will learn about *Enterococcus*, a type of fecal indicator bacteria, and how to collect samples to be tested for *Enterococcus*. View the certification description document for more information on specific duties and qualifications and contact the Water Quality Team at waterquality@galvbay.org to register!

WMT Dissolved Oxygen Data Overview

It is easily understood that the amount of dissolved oxygen (DO) present in a body of water can affect an aquatic organism's ability to reproduce, feed, and breathe. However, it may be less known that dissolved oxygen is itself strongly affected by other parameters such as temperature and salinity. DO has an inverse relationship with both temperature and salinity, meaning that DO will decrease as either temperature or salinity increase. It is for this reason that DO levels are much higher in the winter and spring: cooler waters and a higher input of freshwater.

Bike Around the Bay

October 12-13, 2013

GBF Monitoring Team Facebook Group

The WMT has its very own Facebook Group! Keep in touch with the rest of the team, view recent news, share photos and interesting stories from the field. Request to join by contacting waterquality@galvbay.org.

Submit water pollution reports to GBAN

Galveston Bay Action Network

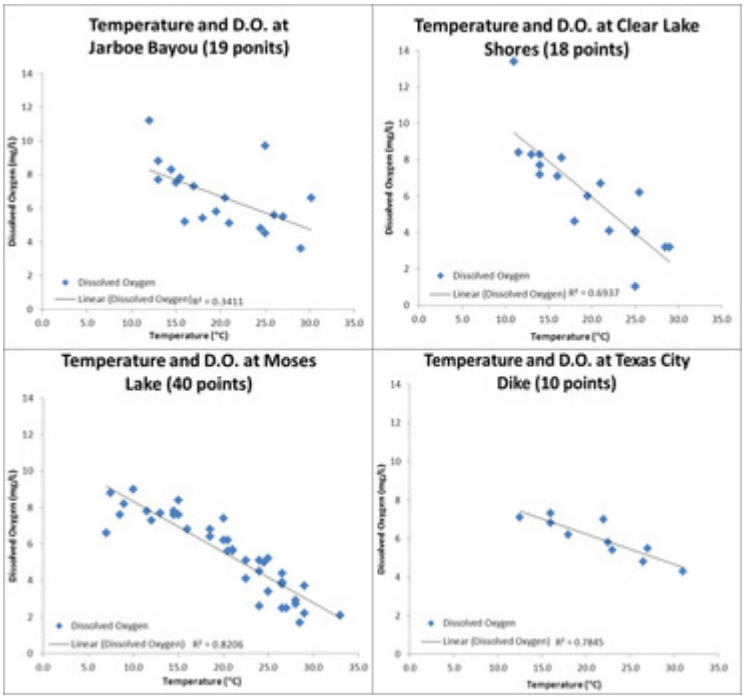

Figure 1 (click image to enlarge)

Figure 1 shows DO trends from four WMT sites that highlight this inverse relationship – as water temperature goes up, DO goes down.

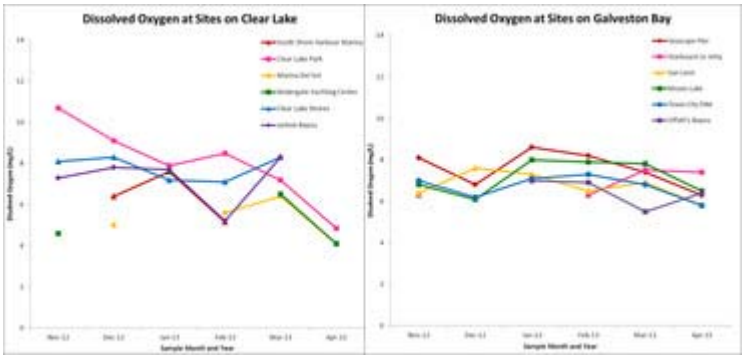

Figure 2 (click image to enlarge)

As shown in Figure 2, sites on Galveston Bay tend to have DO levels that stay more stable throughout the year, while sites on Clear Lake tend to fluctuate more. Among other factors, this fluctuation within Clear Lake could be due to its tributaries (input freshwater from shallow waters easily affected by air temperature) or the higher concentration of marinas and other forms of development (fewer wetlands, less surface area of water). GBF analyzed twelve Water Monitoring Team sites that had continuous data for salinity, DO, pH, and bacteria from

October 2012 to March 2013. If you are interested in viewing the other figures associated with this, contact the Water Quality Team at waterquality@galvbay.org.

QA/QC Corner

Sticking with the theme of dissolved oxygen, here are a few tricks to estimate the amount of DO present in a water sample before you even titrate! The first indicator is the time it takes for the cloudy precipitate to settle below the shoulder of the bottle; the longer it takes, the higher the DO levels will likely be. Another good visual cue is the presence of rusty, red flakes that are created upon the introduction of sulfuric acid. This occurrence will become more prominent with higher DO levels, as seen in the figure below. The less noticeable the flakes are, the lower the DO level is likely to be.

If these flakes are large and numerous, they may not dissolve in even 10 minutes of mixing and may require the addition of two more drops of sulfuric acid.

Creating a more acidic environment will help to dissolve these red flakes, but mixing will still be required. A third indicator of DO levels is the color of the clear liquid created once the sample is fixed. Samples that are dark yellow-brown likely have higher DO levels and a pale yellow sample indicates lower DO. It's neat being able to 'predict' your DO results. Try it out next time!

Volunteer Spotlight: Glen Graves, Amber Faubion, and Yulenty Deal

As the Marina Manager of Marina Del Sol, Amber Faubion has lead her workplace to be part of GBF's Clean Water Partnership program – working with Charlene Bohanon to install pet waste stations, hold water quality presentations, and even be the host of a team of Water Quality Monitors! In December of 2012, Marina Del Sol became an official water quality monitoring site equipped with three monitors, Amber, Glen, and Yulenty. Glen and Yulenty became involved in water monitoring due to their close contact with the water – they both live aboard their boats at Marina Del Sol! The three of them have been working together to collect monthly water quality samples, become certified as Volunteer Bacteria Samplers, and participate in a short-term research project at the marina. They have definitely shown themselves to be dedicated ambassadors for clean water. Great job Marina Del Sol team!

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