

WATER QUALITY ISSUES

BLUE WATER TASK FORCE: TRANSLATING SCIENCE INTO ACTION

By Mara Dias



San Vicente Creek Mouth at Fitzgerald Marine Reserve, Moss Beach, Calif.

The Blue Water Task Force (BWTF) is a volunteer water-quality monitoring, education and advocacy program. Designed to take advantage of the daily presence of surfers and beachgoers in coastal waters, it is the Surfrider Foundation's most visible and successful program to date. A recent survey of the BWTF revealed that there are 24 Chapters actively monitoring the water quality of their local ocean beaches.

While most Chapters use the Surfrider Foundation's web site to store their water quality data (www.surfrider.org/whatwedo3c.asp), many other forms of media are used to share this valuable coastal information. Water quality data is posted on Chapter and partnering organization web sites. Data is distributed to Chapter email lists and sent to local government officials and health departments. And some Chapters also post their data at surf shops, beaches and in their local newspapers.

The BWTF program serves many purposes beyond providing a record of beach water quality. The Chapters use the program to educate students about water quality issues and to promote a coastal stewardship ethic. The BWTF also provides an excellent volunteer activity that could require as little as one to two hours per month for a water sample collector or as much as five or more hours a week for a program coordinator.

Some Chapter programs focus on popular beaches or those with known pollution problems, while others choose their sampling sites to fill in the gaps left by local health agencies. More and more Chapters are also beginning to participate directly in agency beach-monitoring programs by collecting samples from beaches that are not normally tested or during off-season months.

In addition to an almost universal appeal for more volunteers expressed during the recent program survey, many Chapters would also like to see their BWTF programs expanded beyond reporting water quality information to working proactively to identify pollution problems and initiate change in their communities. The last article in this series discussed several examples of Chapters that are collaborating with their local governments to track the sources of beach pollution. Ultimately, the goal is to take action to clean up our coastal watersheds and improve the water quality at our beaches.

The San Mateo County Chapter has been successful in doing just that in the San Vicente Creek watershed. The San Vicente Creek drains to the ocean at the James V. Fitzgerald Marine Reserve in California. The Chapter's interest in this watershed began when they noticed that the beach was almost constantly posted with a swimming advisory due to high bacterial counts. Despite the advisory, the Fitzgerald Marine Reserve is a very popular beach for school field trips, and children were observed washing their hands in the creek on numerous occasions.

The Chapter decided to contact local authorities at their County Environmental Health Department to investigate the source of the bacterial pollution. Together with the County and landowners they began testing the water quality upstream to identify hot spots of pollution in San Vicente Creek. This collaborative study identified numerous sources including old septic and sewer systems, animal pens, illegal agricultural residences, equestrian facilities and illegal discharges.

All landowners were very keen to take action to reduce their impact on the San Vicente Creek Watershed. The Chapter and County worked with the equestrian facilities to install



CAROLANN TOWNE



Watershed Discovery Workshop students replicating a storm event on the Non-point source EnviroScape interactive model, Moss Beach Ranch, Moss Beach, Calif.

CAROLANN TOWNE

CATHERINE CARLSON-CROCKE



RICH ALLEN

Brian Martinez, San Mateo County Environmental Health, water sampling at San Vicente Creek, Moss Beach, Calif.

County Park Ranger, Sarah Lenz, explaining the land to sea connection to Watershed Discovery Workshop students, Fitzgerald Marine Reserve, Moss Beach, Calif.

Best Management Practices (BMPs) such as moving fences away from the creek, moving manure piles, composting manure, changing how horses are pastured and altering the farms' drainage systems. The Chapter now conducts monthly water quality monitoring at the equestrian facilities and brings middle school students to Moss Beach Ranch to demonstrate the BMPs.

This watershed tour is part of the Chapter's Watershed Discovery Workshop aimed at teaching students how to protect a watershed. Beginning at the Fitzgerald Marine Reserve, the kids receive an introduction to the watershed from the county park rangers and collect water samples. At the Surfrider Foundation laboratory they receive hands-on science experience analyzing the water samples. Watershed models are also built to explore how watersheds work and the impacts of pollution. This program reaches both the kids and their parental chaperones.

The water quality at the beach in the Fitzgerald Marine Reserve has improved. The beach isn't posted as often as it once was. Even when the water quality does not meet the bathing standard, the bacteria levels aren't as high as they once were. These improvements in water quality

have caught the attention of the community and the local press, www.examiner.com/a-649285-County_marine_reserve_on_mend.html.

Pleased with their initial results, the San Mateo County Chapter is continuing their investigative work. The Chapter and county are conducting bi-weekly sampling in the lower, suburban part of the San Vicente Watershed. They suspect illegal dumping and old sewer infrastructure may be causing elevated bacterial counts in this downstream area.

Mara holds a MS in Environmental Studies from the University of Charleston. As Surfrider Foundation's first East Coast environmental staff member, Mara works on national and chapter-specific water quality campaigns and monitoring programs.

More information on the San Mateo County Blue Water Task Force (BWTF) can be found on the Chapter's web site at www.surfridersmc.org.

To read a full report of the recent BWTF survey and to learn about the different water quality campaigns the Chapters are conducting visit the Surfrider Foundation's web site at www.surfrider.org/whatwedo3c.asp.

Toxic Ocean Algae

Each year our coasts are impacted by large visible patches, or blooms, of microscopic plants often called "Red Tides" because of the reddish tint they give the water. While usually not harmful to humans, a small number can contain neurotoxins, which can travel up the food chain eventually causing illness, particularly through consumption of tainted shellfish. Still others can release those toxins directly into the water or air causing discomfort or even illness for people in the immediate area. One particularly virulent toxin that's been making headlines on the West Coast is "Domoic Acid". This has been seen to cause disorientation and strange behavior before eventually leading to death in sea lions and sea birds. You can read more about this in articles on "Red Tides" and "Domoic Acid" in our Coastal A-Z section of the Surfrider Foundation web site.

Coastal A-Z provides a valuable collection of educational articles on a wide variety of topics about our coasts and oceans. You can find it under the "What We Do" heading on our web site, or directly at www.surfrider.org/whatwedo4b.asp.