

RITA AROUND TOWN

Local crowd has its say on healthy beaches

A crowd of about 40 people gathered at Lemon Bay Park's meeting room Wednesday evening to listen to the experts speak on our favorite HAB or "harmful algal bloom," otherwise known as red tide.

Chuck Henry, the environmental administrator for the Office of Environmental Health Services of Sarasota County Health Department, opened the gathering, then turned the podium over to David Pouso, healthy beaches coordinator. Before the subject of red tide ensued, Pouso told the crowd about how beaches are monitored for other interlopers.

The "Healthy Beaches Program" was established in 2000 to monitor coastal waters, to identify potential sources of water pollution and advise the public if the water does not meet Health Department standards. The program also educates the public about water quality issues such as red tide with concise printed material.

Weekly water samples are taken from 16 sites around the county, stretching from Longboat Key Beach, through Siesta, Turtle, Nokomis, Venice and Manasota beaches, ending at Blind Pass Beach. The samples are analyzed for enterococci and fecal coliform, which may indicate the presence of pathogenic microorganisms.

That's fancy scientific jargon for unsafe water.

Mind you, those bacteria hang around in our intestinal tracts, as well as those of animals. Once they leave us, however, through sewage and runoff, and gather in large concentrations, they may cause disease if ingested or if they enter the skin through a cut or sore.

Those weekly beach sample results may be found at www.doh.state.fl.us under "Beach Water Quality."

Next, Barbara Kirkpatrick, a senior scientist at the Mote Marine Laboratory Environmental Health Program, told the group that red tide has been around for centuries. Documentation of "massive discolored water" with dead fish was discovered as far back as the 1600s from sea captains' logs. It was first officially recorded in Florida in 1844.

Scientists like Kirkpatrick serve as a resource for a community-based environmental group that was formed to combine scientific expertise with community-identified environmental issues. The PACE EH group -- or "Protocol Assessing Community Excellence in Environmental Health" -- gets input from its residents on health-related problems specifically in coastal communities in Sarasota County.

This input drives Action Plans to improve water safety and quality.

The PACE EH welcomes input electronically on their Web site at www.ourgulfenvironment.net, which also posts weekly red tide counts.

Kirkpatrick works closely with other institutions such as Woods Hole Laboratory in Massachusetts and the University of South Florida, researching trends in red tide and its impact not only on human health, but also its economic impact. Harmful algal blooms may occur in fresh or salt water, and in tropical or freezing sub-polar waters. There are over 100 species and some are non-toxic.

Florida red tide, or *Karenia brevis*, is a microscopic plant-like organism -- yes, it actually undergoes photosynthesis -- that produces toxins, specifically neurotoxins. "Neuro" involves the nervous system, so these toxins actually paralyze the gills of fish, and when they can't breathe, they die and float up on our beaches.

Interestingly, the toxins accumulate in shellfish, but they do not kill the mollusk inside, so when the innocent clam-eater sucks that cooked clam down, those toxins are absorbed into their stomach. Cooking the shellfish will kill the bacteria, but will not deactivate the toxin. So people who do their own shell-fishing are in danger of becoming quite sick if they are unaware that red tide is in their waters.

Early detection, then, is key to preventing sickness. Satellites help by viewing the changes in the water from the heavens and beaming this information to scientists. Kirkpatrick's husband, an engineer, developed a machine years ago that takes water samples and discerns presence of red tide through light-absorption.

The prototype was made on their kitchen table, but today's model resembles a bright-yellow missile complete with fins. It is a free-swimming robot programmed via GPS to go anywhere and send data back to scientists via satellite, staying underwater a month at a time. To view weekly bulletins on this, take a look at www.csc.noaa.gov.

For those of you who do not use a computer, here are a few telephone numbers to call for more information on red tide: the Red Tide Health Hotline for questions and advice is free at 1-888-232-8635, and is staffed 24/7 by health professionals. The Sarasota County Health Department's number is 941-861-6133.

The goal of ongoing research of red tide and other HABs is to minimize their impact with early detection; decreasing the use of nutrients (read: nitrogen and other harmful chemicals in fertilizers and pesticides used on agriculture, including your lawn); forecasting the onset of red tide, and identification of harmful health effects.

Rob Bolesta, an engineer with the Environmental Health Services Office in Sarasota County, ended the meeting with information about watersheds -- the land and network of canals, bays, ponds, creeks, streams and the larger body of water into which they all empty.

We have five watersheds in Sarasota County: Sarasota and Little Sarasota bays, Dona/Roberts Bay, Myakka River and Lemon Bay.

The attendees were asked to form two groups and come up with their choice of the most important environmental issue facing southwest Floridians today. To see the results, go to www.gulfenvironment.net. This is an example of how the public's input is utilized in the PACE EH Sarasota Coastal Communities group.

The meeting was sponsored by the Lemon Bay League and the Englewood Community Health Assessment Team. Avail yourself of the Web sites and phone numbers to keep abreast of all things red.

And don't forget to have a great Floriday!